DOCUMENT RESUME

ED 058 542 AC 012 256

AUTHOR	Pedersen, Eigil D.; And Others
TITLE	Status and Prospects of Educational Research in Quebec. Volumes I and II.
INSTITUTION	Quebec Inst. of Research in Education, Montreal.
PUB DATE	71
NOTE	518p.
EDRS PRICE	MF-$0.65 HC-$19.74
DESCRIPTORS	*Adult Educators; Age Differences; College Deans; College Teachers; Data Collection; *Educational Research; Educational Researchers; Graduate Students; Interviews; *Professional Personnel; *Questionnaires; Research Projects; Sex Differences; Student Attitudes; Universities
IDENTIFIERS	Canada; Montreal; *Quebec; State of the Art Reviews

ABSTRACT

These two volumes contain a complete report on an inventory of the state of educational research in Quebec, as surveyed in 1968-1969. Four different populations--deans, professors of education, graduate students in education, and educational researchers other than faculties of education--were studied, using a particular instrument designed for the purpose. All instruments were produced in English and French, and the first of three questionnaires were tested in both languages. Volume I contains two chapters: Chapter I deals with data obtained from the deans; Chapter II concerns data obtained from members of faculties of education. Volume II contains three chapters: Chapter III analyzes responses from students in the field of education, and Chapter [illegible]V deals with data from researchers in organizations other than the faculties of education; Chapter V compares and contrasts the information obtained from all categories of respondents, and attempts to draw conclusions. Volume I contains 16 appendices and 104 tables, and Volume II contains 31 appendices and 112 tables. In addition, there are 48 recommendations, which concern background, activities, interaction, factors related to the undertaking of research, kinds of research being undertaken, meeting needs and offering incentives, training of researchers, and job opportunities. (DB)

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ED 058542

QUÉBEC

Vol. I

STATUS AND PROSPECTS of educational research in québec

Eigil D. Pedersen
T. Annette Faucher
Keith J. Dowd

1971

Department of Education
Institute of Research in Education

AC012256

STATUS AND PROSPECTS
OF
EDUCATIONAL RESEARCH IN QUEBEC

BY

EIGIL D. PEDERSEN

T. ANNETTE FAUCHER

KEITH J. DOWD

VOLUME I

DEPARTMENT OF EDUCATION

INSTITUTE OF RESEARCH IN EDUCATION

QUEBEC

1971

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PREFACE

In its first meeting, in November 1967, the Planning Committee for the Development of Educational Research[1] formed a sub-committee to establish "suitable methods of determining the state of educational research in Quebec and (to take) the necessary steps to carry out this inventory". This inventory was intended to provide a basis for planning and coordinating educational research in the province, which were the two main items of the Planning Committee's mandate; the inquiry, therefore, was to comprise all researchers, whatever their field of endeavour, and also to produce information on researchers-to-be, that is students in the field of education.

The subcommittee met in July 1968 and adopted a general plan for the proposed study, embracing a survey of the individual researchers, the research setting in which they worked, the resources available to them, their research activities, their needs and interests, their wishes and suggestions, and the research community in general. Another major aim was to learn about the factors related to research productivity with respect both to the past and the present, and to foresee the future in terms of the plans of qualified researchers and of the training of new researchers.

These two volumes contain a complete report on the inventory, a summary[2] of which has already been published in September 1970. The I.R.E. believes that the results of this survey, although they were, in the first instance, intended for its own purposes and those of the Planning Committee, may be of interest to those, in universities and educational organizations, who do research or use its results, both in and outside Quebec.

---

[1] An advisory body to the Minister of Education.

[2] Educational Research in Quebec: Resources, Problems and Prospects, 1968-69 Department of Education, Institute of Research in Education, Quebec, 1970.

I am thus pleased to present this report which is being distributed to libraries in universities and research centers in Canada and abroad. I wish to thank the authors for the very useful work they have achieved, and all those who participated in or facilitated this endeavour.

Jean-Marie JOLY
Director of the I.R.E.

March 15, 1971

FOREWORD

The authors are pleased to present the I.R.E. with this complete report on the inventory of educational research in Quebec and trust that it will serve the purposes for which it was ordered.

In 1968, a sub-committee of the Planning Committee for the Development of Educational Research was set up to organize an inventory of educational research in Quebec, and made a plan to achieve two main goals: a description of the research milieu in Quebec and a study of research productivity.

In the early stage of the planning, the Institute of Research in Education (I.R.E.) invited the author of an extensive study in the United States[1], Dr. Sam D. Sieber, to discuss the study with the sub-committee. Dr. Sieber was very helpful in describing his own experience and in providing the sub-committee with relevant material.

The first questionnaire - to the deans of faculties of Education - was then developed and Dr. Jean-Marie Joly, director of the I.R.E., conducted the interviews where the deans answered to that questionnaire.

At this point of the survey, the sub-committee recommended that a team be charged with the elaboration of the other questionnaires and with the analysis of the results. The I.R.E. then appointed Dr. Gabriel Breton, of Sir George Williams University, Mr. Keith J. Dowd, of Bishop's University, and Dr. Eigil Pedersen, of McGill University, and assigned Miss Thérèse Annette Faucher, of its own staff, to pursue the different phases of the work.

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[1] SIEBER, Sam D. & LAZARSFELD, Paul F. The Organization of Educational Research in the United States, Bureau of Applied Social Research, Columbia University, New York City, 1966.

This team drew up three questionnaires - to professors of faculties of Education, to students in Education, to researchers in various organizations. The questionnaire for faculty members was pre-tested, by Dr. Breton with French-speaking professors at the University of Ottawa, and by Mr. Dowd, at the University of New-Brunswick.

By June 1969, the three questionnaires had been sent out to the different populations. Dr. Breton had to resign at this moment, and the early stages of the analysis of results and of the writing were undertaken by the three other members of the team.

A preliminary report was published in September 1970[2] ; the writing of this, as well as of the present two volumes, was completed by Dr. Pedersen and Miss Faucher.

From the building up of the questionnaire to the end of the analysis, the data processing service of the Quebec Department of Education (SIMEQ) offered an indispensable collaboration, especially through Mr. Benoît Breton, Mr. Bernard Gâteau and Mr. Jean-Jacques Scoriot.

A great number of tasks were performed at the I.R.E. Two main groups were involved in these: from the beginning, the secretariat provided varied clerical help and we wish to acknowledge in particular, the patient and efficient collaboration of Mrs. E. Normand and Miss. F. Robitaille; the other group was a team of four I.R.E. members who, under the leadership of Mr. Paul Lemire, was charged with the preliminary check of numerous contingency tables.

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[2] État de la recherche pédagogique au Québec, 1968-1969, Ministère de l'Éducation, Institut de recherche pédagogique, Québec, 1970.
Educational Research in Quebec: Resources, Problems, and Prospects, 1968-69 Department of Education, Institute of Research in Education, Quebec, 1970.

We wish to express our gratitude to Deans C. Wayne Hall, of McGill University, Richard Joly, of the University of Sherbrooke, John Macdonald, of Sir George Williams University, Gabriel La Rocque, of the University of Montreal, Jean-Yves Drolet, of Laval University, and James Angrave, of Bishop's University, who gave long interviews and then read and commented on the draft report on these interviews; to Deans Lionel Desjarlais, of the University of Ottawa, and Robert J. Love, of the University of New Brunswick, who made possible the pre-test of the questionnaire to professors of Education, and to the members of their faculties who participated in this pre-test; to the members of faculties of Education, to the students, and to the other respondents to our different questionnaires.

INTRODUCTION

Populations Studied

Four different populations - deans, professors of education, graduate students in education, and educational researchers in contexts other than faculties of education - were studied, in each case through the use of a particular instrument designed for the purpose. An interview schedule, including a standard set of questions, was designed for use with the deans, and a series of three separate but parallel questionnaires were developed to obtain information from professors of education, students, and other educational researchers. The design stage included the study of instruments used in previous projects of this type which were carried out elsewhere. Of particular importance in this phase of the work was the Sieber and Lazarsfeld questionnaires[1], and other questionnaires, materials, and advice presented by Dr. Sieber.

All instruments were produced in English and French. The first of the three questionnaires was tested in both languages, through the kind cooperation of professors at the University of Ottawa and the University of New Brunswick.

---

[1] SIEBER, Sam D. & LAZARSFELD, Paul F. *Op. Cit.*, Appendix F.

Collection of Data

In the late fall of 1968, the deans of faculties of Education[2] in the six Quebec universities[3] , were interviewed.

In January 1969, 235 questionnaires were sent to full-time members of the faculties or departments of Education of the same universities; two thirds of these professors responded.

The student population was difficult to determine because of the complexity of structures where graduate training in education is offered. In fact, 1 788 questionnaires were addressed in March 1969, to full-time and part-time graduate students in faculties of Education, departments of Psychology or Sociology, *Écoles normales supérieures,* and to a number of Quebec residents studying at universities outside the Province. Fifty one per cent of this population answered the questionnaire.

Finally, a questionnaire was distributed in May 1969, to 585 persons who, we assumed, might possibly be engaged in research related directly or indirectly to education. These included non-education professors, professional researchers, teachers, guidance counselors, and administrators. The organizational contexts included departments of sociology and psychology of universities, colleges, normal schools, school boards, teacher organizations, private research institutes, and government agencies. In this fourth phase, we were aware that many should be canvassed to obtain response from the few to whom our questionnaire would be appropriate. Therefore, the questionnaire included instruction to the subjects to answer only a special answer sheet unless they clearly had educational research interests. The response rate was 46 per cent. Of these, 137 had provided answers to the whole questionnaire, and these answers are the basis of part of this report (chapter IV).

---

[2] "Deans" in this report refers to deans of faculties of Education or chairmen of departments of Education, depending on the organization of the particular university.

[3] At that time, the University of Quebec was not yet established. The six universities mentioned are Bishop's University, Laval University, McGill University, University of Montreal, University of Sherbrooke, and Sir George Williams University.

The response rates to the three questionnaires resulted from an initial request and two follow-up letters. Anonymity was guaranteed to all groups of respondents: hence, no individual respondents are identified, and letters are used to designate the universities. The information obtained is relevant to the academic year 1968-69 only.

Definition of Educational Research

Instead of providing a definition of educational research, we presented a standard question to all four groups of respondents asking them to identify activities which, in their opinion, constituted educational research. Their responses revealed points of agreement and dissent. These are presented in Chapter V.

Since one of the main aims of the inventory was to determine factors related to research productivity, this lack of agreement on the part of respondents as to what educational research is, poses some difficulties.

We have taken this into consideration in our work, and feel fairly confident that in the productivity analyses, the problems have been overcome.

General Plan of the Chapters

This presentation is divided into five chapters. Each of the first four chapters deals with a separate sub-sample. Thus, Chapter I presents information provided by the deans, Chapter II deals with data obtained from members of faculties of education, Chapter III is based on students' response and Chapter IV on the replies of researchers in other contexts. Chapter V summarizes and concludes the presentation of the findings for the sample as a whole.

The general formats of each of the five chapters are kept as parallel as possible. The topics dealt with are the following, in order: the definition of research, background (rank, academic and professional training, experience, and the like), current activities, attitudes related to research, factors related to the undertaking of research (career advantages resulting from research, sabbatical leaves, factors influencing the choice of research problems, and needs of the researchers), kinds of research being undertaken, interaction with other scientific personnel, attitudes towards interaction, problems related to the conduct of research, the training of researchers, research productivity, and finally, research plans.

The characteristics of the three large universities are presented at the beginnings of Chapters II and III. Discussion of the other three universities separately was avoided because of their small size or very recent origin, both of which make generalizations dangerous if not meaningless. In each chapter there is a general description without regard to particular universities. Throughout these descriptions, we present the results of analyses which relate research productivity to factors such as training, opinions, other activities, and so on. These analyses are always based on the whole sample, and not just the largest universities. The chi square test was applied to contingency tables for these analyses, and the criterion for statistical significance applied is the .05 level of confidence or better.

CHAPTER I

Introduction

This chapter is concerned with the background, experience, research activities, and opinions concerning research, of the six deans of Education[1] in the Province of Quebec. While in subsequent chapters, for reasons explained elsewhere, we have excluded three of the universities in our descriptive work, it does not seem contradictory to include them all in this particular chapter.

In the descriptions that follow, we have been able to uncover only the grossest population figures among faculty members and the students. There are three reasons for this: first, the kinds of records kept made this a difficult task in some universities; second, the variety of schools and faculties into which education students are enrolled made it difficult to identify them as education students in some universities; third, we have not had time to pursue some of the suggestions that were made by the deans which might have led to the uncovering of more information. We must state here, however, that statistical material was only a part of the information we wished to obtain from interviews with the deans. We also wished to have from them expressions of the official policy of their universities in a number of matters; and we regard the statements of the deans in these affairs as authoritative.

Most of the statistical questions did not apply to University D or F, but when they did, information was available. University E was unable to provide information of the exact type that we required.

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[1] Not all six respondents had the formal title of "Dean", but all had roughly equivalent duties within their organizations and therefore we are collecting them together under this title. For similar reasons we shall refer to all faculties, graduate schools or departments of education as "Faculties of Education".

This is because part-time students are not registered with the faculty of education but with extension service. More important perhaps, is the practice of teaching aspirants registering in other faculties for major parts of their total teacher preparation programs, in some Quebec universities. For example, when we collected these data, students preparing for secondary school teaching careers, in University A, were more likely to be enrolled in faculties related to their teaching specialty rather than in the faculty of education.

However, these things are currently in a state of flux; the patterns have already undergone review and many changes are being instituted in French-Canadian universities with respect to teacher training at the present time.

These problems illustrate two points: first, one cannot design a survey of Quebec educational organizations on an American or even English-Canadian pattern, because cultural differences make exact comparisons difficult and often impossible; second, an exact description of the systems as they were when we collected the data provides us, under the current conditions of very rapid change, with a basis on which to understand evolving educational systems. The reader should be aware that the situation will have changed considerably when he reads this report.

Therefore, our description from this point on will concentrate on patterns and factors, emergent or already established, that appear to have a bearing on research productivity in the Province.

Courses and Research Productivity

The total numbers of students at the six universities varied considerably, from 35 at University F enrolled only in M. A. with thesis, to over 600 at University E enrolled in a wide variety of courses.[2] While this large number might seem favorable from the point of view of future research productivity, the picture is not as promising when one examines the kinds of programs in which the majority of graduate education students are involved.

TABLE I-1

FULL-TIME STUDENT ENROLLMENT IN FACULTIES OF EDUCATION

	UNIVERSITIES						
	A	B	C	D	E	F	TOTAL
WITHOUT THESIS							
Master's	269[a]	285	441[b]	0	677[b]	0	
Doctorate	0	0	0	0	0	0	
	269	285	441	0	677	0	1672
WITH THESIS							
Master's	52[c]	96	71	56	17	35	
Doctorate	16	13	17	0	0	0	
	68	109	88	56	17	35	373

a *licence*
b approximate
c *licence* with thesis not included

Table I-1,[3] while in some cases including approximate figures, shows that the majority of graduate students are involved in Master's or equivalent *licence* programs for which the thesis is not a requirement. In other words, it is clear that only about one graduate student in six is enrolled in a program in which research training will occur. Further to this, of those for whom thesis is a requirement, less than one in eight is working at the doctoral level; it is probably correct to say that the level of sophistication of research training at the Master's or *licence* level is rather low. The most extreme way of looking at these data shows that only about one graduate student in forty five is at the doctoral level. Therefore, we conclude that the great emphasis on the part of professors, which must probably go where the greatest numbers of students are involved, will be on activities other than research. This statement can be further supported by the fact that of the thirteen doctoral candidates at University B, for example, only two so far have begun their involvement in thesis work. The only other university, - A, - for which we have information about current thesis activity, has about three quarters of its research candidates actively engaged in thesis research. It appears, therefore, that the present outlook for the production of educational researchers in Quebec faculties of education is very poor. This is consistent with our observation that only one doctor's degree was awarded to a student in a faculty of education in the year preceding our data collection.

---

[2] There is some difficulty, particularly in Universities A, C and E, in knowing exactly what is meant by the term "graduate student". It is possible in these universities that while some students in the *licence* programs are truly graduate students, others would be at a level more comparable to what is understood by the term "undergraduate". This situation is changing at the present time; but the fact should be borne in mind in attempting to understand the comparisons made in this chapter.

[3] The data in Table I-1 are summarized from more complete figures which are given in Appendix I-1.

Another way of producing researchers is for faculty members with ongoing research to make use of students as research assistants. While this appears to be quite common in some departments of most universities, it is not so in faculties of education. Three of the responding deans flatly stated that they had no students in the capacity of research assistant. Exact information was not available from the other three, but it is quite clear that if they have any, this practice affects an extremely small per cent of graduate students, certainly under one per cent. This again does not appear to be encouraging for future research productivity.

It is probable that for truly effective research to be done, a major time commitment is necessary; yet, an examination of the full-time and part-time status of graduate students in education shows that a large majority are studying part-time, and in many cases during the summer. These comparisons are presented in Table I-2.

TABLE I-2

PART-TIME ENROLLMENT COMPARED TO FULL-TIME

	UNIVERSITIES						
	A	B	C	D	E	F	TOTAL[b]
Full-time	(30)[a]	70	68	0	37	12	187
Part-time	(38)	277	464	0	657	23	1421
Summer	0	47	0	56	0	0	103

a Information available for students with thesis only
b Excluding University A

Requirements for Admission to Graduate Programs

Deans were presented with questions designed to determine what admissions requirements exist at each of their faculties of education. Their replies indicate a great diversity. The major points are summarized in Table I-3.

Table I-3 shows that the only universal requirement is academic achievement of some kind. This refers not only to the quality of achievement, but to the fact that some programs have particular subject pre-requisites.

At University A students entering for the *licence* or *maîtrise* are interviewed concerning their field of interest, and the availability of a professor is considered. Also taken into account is the aptitude of the candidate for research; motivation is evaluated through the interview. Doctoral candidates have to show an aptitude for research and indicate some quality in the research project they propose to undertake.

At University B, the undergraduate program of the candidate is examined for evidence of a strong second class standing. Then the program is also examined for a sequence of subjects in a related field. The Miller Analogies Test is used as a screening device, and letters of reference are required. Certain programs in guidance require interviews as well.

TABLE I-3

SUMMARY OF ADMISSION OR CERTIFICATION REQUIREMENTS

ADMISSION OR CERTIFICATION REQUIREMENTS	UNIVERSITIES					
	A	B	C	D	E	F
Undergraduate Academic Achievement	Yes	Yes	Yes	Yes	Yes	Yes
Experience, Teaching & Admin.	Certain Programs	Preferred	Certain Programs	For Certification only		
Teaching Certificate	Certain Programs	Yes	Advantageous			
Interest & Availability*	Yes		Yes			
Letters of Reference		Yes	Yes		Yes	
Interview	Yes	Certain Programs			Certain Programs	
Standard Tests**		Yes			Certain Programs	
Quality of Research Project	Yes					

* Area of interest of student and availability of professor

** Graduate Record Examination, Miller Analogies, etc.

At University C, the candidate is required to show at least a seventy percent standing in his undergraduate program and to provide letters of reference from teachers that know his work. If he has chosen an area for research, there must be a professor available to direct his work in that subject.

University D demands only that the candidate meet the entrance requirements established by the Protestant Central Board of Examiners for teacher training at the graduate level; that is, to have an undergraduate degree with six courses in a subject taught in high school, or three courses in each of two subjects taught at high school. The screening process occurs at the end of the program when the student launches his thesis project.

University E has, for the most part, had students enter directly from an undergraduate program into the graduate school on the basis of examination results.

At University F, the criteria used to maintain academic excellence are based on having a bachelor's degree with a major at least, preferably in a subject that is commonly taught in schools, with at least a B average in the major. It does not follow however, that every teacher will gain admission to the program.

Apart from undergraduate degree, there does not appear to be any basis common to the six universities for entrance into the graduate level of studies in education and research related to it. Significant perhaps, is the fact that in at least two cases the dean indicated that there are requirements that are not a formal part of the admission standards: at University D, the screening process takes place only when the thesis project is launched, and at University E, the intuitive knowledge of undergraduate work is not defined in any policy statement that we are informed of. Apparently, in these two universities, the deans or their admissions committees have considerable freedom concerning admission to graduate programs and the awarding of the graduate degrees that is somewhat subjective. We have no basis for rejecting the hypothesis that the same conditions may prevail to some extent in the other four universities.

Involvement of Professors in Student Research

In an effort to find out the degree of involvement of professors in student research, we asked the deans:

> "About how many faculty members in the school or department of education are currently supervising dissertations?"

University A makes no distinction between individual or committee supervision, because both patterns are used, both at Master's level, which involves 15 or 16 faculty members, and at Doctor's level, which involves 5 or 6 faculty members. Taking into consideration both levels, about one third of the faculty at University A are involved in thesis supervision.

University B simply indicates that 18 members of their staff, - about 20 per cent, - have thesis supervision duties; at University C, the total is 15 or about 25 per cent. At University D, one of the two members of the faculty has thesis supervision duties whereas at University E, the figure is 4 or 6 members, about 25 per cent. At University F, the question does not apply. In no case is a professor full-time thesis supervisor.

Taking all these things into consideration, we are led to conclude that only a small proportion of the professors of education are assisting students with their dissertation research.[4]

Graduate Students in Education and Research Careers

In response to the question:

> "About what proportion of your graduate students are preparing themselves for...(research careers)?"

the deans at only two universities, B and E, indicate that any students whatever are preparing themselves for research. At University D, the dean feels that students generally are headed for school teaching or school administration. The summary of the deans' answers appears in Table I-4.

While the information in Table I-4 is incomplete, it is evident that research is not a career option for even a very small per cent of graduate students in education. One good reason for this may have been indicated by the dean at University A, when he stated that "many are interested in research, but few think it is possible as a career".

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[4] In their comments to the preliminary draft of this chapter, two of the deans reacted to this statement by explaining that there were only a few students doing thesis research and that in many cases, education professors were not qualified to assist students in research.

TABLE I-4

Q. 1.8 About what proportion of your graduate students are preparing themselves for the following careers?

	UNIVERSITIES					
	A	B	C	D	E	F[c]
Research	a	6%	b		1%	
School Teaching	75%	24	50	45%	80	
College Teaching	d	24		5		
School Administration		39	35	45		
College Administration	e	5		5		
Other		2	12		20	

a Dean's comment: "Many are interested in research, but few think it is possible as a career".
b Replies in this column are approximate. The Dean was unable to evaluate precisely because distinction between those planning careers in schools, college or administration and those planning to do research cannot be inferred from programs in which students are registered.
c Does not apply. University F had no graduates at the time of the survey.
d Students intending to teach in colleges are enrolled in another school.
e Two or three per cent.

In an attempt to get a more objective estimate of the importance of research as a career to graduate students in education, we asked the deans to estimate the proportion of graduate degree recipients in the past three years whose first positions after receiving the degree were in school systems, in colleges and universities, or elsewhere; further, we requested information on the extent to which their appointments involved them in research. The replies to this question make it obvious that very few systematic efforts are made to determine the ultimate use made of their training by graduate students. Table I-5 summarizes the information about subsequent careers.

TABLE I-5

Q. 1.9 Please estimate the proportion of graduate recipients in the past three years whose first position after receiving the degree was in each of the following fields.

	UNIVERSITIES					
	A	B	C	D	E	F
In school systems	-	most[a]	93%	95%	97%	NA
In colleges or universities	-	b	5	5	1	NA
Elsewhere	-		2	0	2	NA

a Some research: "a few"
Only research: "none"
b "About a dozen"

While the information which appears in Table I-5 is based on rough estimates, it makes it very clear that the vast majority of graduating students in the three years preceding our study found themselves in the public school systems following graduation. In this regard, it is only fair to note that the most immediate responsibility of the faculties of education is the servicing of the needs of the school systems.

There is no information available for University A; at University F, since department of education is new, there have been no graduates in the past few years; in other cases, the deans indicate that very few, - virtually none, - of past graduates have gone into research. The one exception to this is University B, where the dean indicates that perhaps as many as twelve had gone on to research, but this was by virtue of moving on into doctoral programs in other universities, and the research would be that required for the doctoral thesis, rather than that demanded by a subsequent career.

In the interview, and in relation to the question at the head of Table I-5, deans were asked for information about those who had graduated with professional degrees and with research degrees. Their responses lead us to conclude that University B is the only one that makes distinction between research and professional degrees: the dean indicates that 45 per cent of the recipients of the professional Master's degree (M. Ed.) went into school systems with no research, and 35 per cent went into school systems with some research assignment. Of those with research degrees (M.A.), a slightly smaller per cent (15 per cent as compared to 20 per cent for those with professional degrees) are indicated as having carried out some research in colleges or university. Similarly, 30 per cent with M.A.s as compared to 35 per cent with M.Ed.s are thought to have done some research in school systems. However, it was indicated that 15 per cent of graduates with research degrees had done some research "elsewhere", as compared to none with M.Ed.s. These probably are the same dozen or so who were doing research in connection with study for the doctorate rather than in connection with a "first position" after receiving the degree.

If we can conclude anything from these skimpy data, it is that in the single case where a distinction is made, research Master's degrees may lead to further research at the doctoral level in some other university, whereas professional degrees tend to lead directly into some work position; therefore, more emphasis on research degrees would probably increase our future research capacity.

Demand for Graduates with Research Abilities

We have already observed (see Table I-4) that almost none of the students are planning research careers. It may be that one reason for so little emphasis on research in educational graduate training is a lack of demand for educational research. To check on this, deans were asked about the numbers of requests they receive for candidates for a variety of positions, including research. The question, and the responses of the deans, appear in Table I-6.

TABLE I-6

Q. 1.10 About how many requests for graduates do you receive each year for the following jobs:

	UNIVERSITIES					
	A	B	C	D	E	F
Administration	33%	0[a]	0	0	5%	NA
Teaching	33	0	almost[b] 100%	100%	95	NA
Research	0	0	0	0	0	NA
Guidance	33	0	0	0	0	NA

a Comments of the dean of University B imply that the demand is addressed directly to employees who then become graduate students. Most graduate students at University B are part-time students, holding full-time teaching or other posts.

b Also Guidance, Audio-visual teaching, etc.

No dean indicates any request for graduates for research jobs. In view of this, the lack of emphasis on training in research, is not surprising.

Collaboration with Personnel outside of Faculty of Education

It has been suggested by Sieber that where faculties of education collaborate in many ways with members of other faculties, the amount and quality of research productivity is higher than in the case of insular faculties who operate as independently as possible from other faculties. For example, he reported that "In the universities of a high reputation, 86 per cent of the schools of education engage in joint-selection of the faculty, while in the "other" universities only 30 per cent of the schools do".[5] For this reason, we raised this and a number of other questions concerning the extent of interaction with others outside of the faculty. This is the concern of this part of Chapter I.

Deans were asked to indicate whether courses were required outside of their own faculty for students engaged in graduate study. Their answers, indicating the exact departments in which collaboration takes place, are summarized in Table I-7.

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[5] Sieber & Lazarsfeld, *Op. cit.*, p. 74.

TABLE I-7

COURSES OUTSIDE SCHOOL OR DEPARTMENT OF EDUCATION REQUIRED, BY DEPARTMENT (Q. 1.11)

	UNIVERSITIES					
	A	B	C	D	E	F
Arts		✓			✓	
Letters	✓				✓	
Social Sciences	✓		✓		✓	
Theology					✓	
Sciences	✓	✓			✓	
Administration	✓					
Computer Sciences			✓			
Hygiene			✓			
Psychology			✓			
Instructional Media						✓

The requirement for students to do course work outside the faculty of education is more common in French-speaking universities than in English-speaking universities, and the number of external contacts is larger on the French side.

Another area in which members of different faculties work together with graduate students in education is that of thesis evaluation; here, the extent of out-of-faculty interaction is greater and more universal than in the area of required courses. The information is summarized in Table I-8.

In Table I-8, it can be observed that the preponderant pattern is to require the evaluation of theses by experts outside the university, or by members of other faculties but within the same university. It is interesting to note that at both Universities A and B, there are certain Master's degrees requiring evaluation by faculty members only, and others requiring evaluation by members of other faculties; this implies that policies vary from program to program within the same faculty.

TABLE I-8

Q. 1.13 Are theses evaluated by:

	UNIVERSITIES											
	A		B		C		D		E		F	
	M[1]	D[2]	M	D	M	D	M	D	M	D	M	D
Faculty members	✓		✓		✓							
Members of other faculties	✓	✓	✓	✓			✓		✓		✓	
Experts outside university		✓	✓	✓		✓	✓		✓		✓	

[1] Master's
[2] Doctorate

It should be borne in mind that while collaboration with outsiders in thesis evaluation undoubtedly acts as a check on the quality of the work done, it is a form of interaction that has far less impact on the actual process of research and research training than collaboration before the research is completed.

Another rather indirect way of dealing with the question of interaction with out-of-faculty researchers or teachers is to look at the members of the regular faculty involved in teaching courses to graduate students. If the number of faculty is very small compared to the student enrollment, then it is likely that out-of-faculty professors will be brought into graduate programs. Table I-9 presents this information.

Table I-9 indicates that some universities are offering graduate courses with extremely limited personnel resources. If one compares the figures presented in Table I-9 to student totals in Table I-1, it is necessary to conclude that student-teacher ratios are often below those required even at the undergraduate level. Information obtained by interviewing and other means indicates that for some of the universities, possibly B and certainly D, graduate programs are possible only because of the availability of staff who come from other universities to teach summer school. While this is undoubtedly a good solution to the problem of offering courses in spite of low staff-student ratios - especially where many candidates are part-time or summer students only, it is unlikely that summer staff would have the length of contact necessary with students to offer much individual assistance or training in actual research activities.

TABLE I-9

Q. 1.14 How many persons are teaching courses to graduate students in the school or department of education, either full-time or part-time?

	UNIVERSITIES					
	A	B	C	D	E	F
Full-time	22	8	20	2	15	5
Part-time	-	Not specified	8-10	2[a]	40[b]	2

a summer school only
b approximate

Implicit in the position stated by Sieber to which we referred at the beginning of this section of the chapter, is the idea that a sense of parochialism or educational isolationism is a hindering factor in educational research productivity. To get at this idea from the point of view of the background of the actual professors in faculties of education, we asked the deans:

> "Are there any departments or similar divisions within the graduate school or department of education in which the majority of the faculty received most of their training for their highest degrees outside of any school or department of education? IF YES: Which departments or divisions?"

Only one dean (University C) indicated any actual departments in which a majority of faculty received most of their training for their highest degrees outside of a school of education; he stated that this was so in three departments: special education, elementary school teaching, and the *Ecole normale supérieure*.[6] The dean at University A replied that it was likely that their department of physical education was in this category. Although they did not specify by departments, the dean at University B answered that about half of his faculty working with graduate students have such training, and the dean at University F indicated that two of his seven members have most of their training for their highest degree outside of any school or department of education.

It seems that on the whole, the majority of professors in faculties of education in the six universities have taken most of their training for their highest degree in a school or department of education. If this is true and if Sieber's findings in the U.S. can be applied to Quebec, it is yet another indicator of low capacity to do educational research in faculties of education in Quebec.

We asked a question which gave an opportunity to summarize in general the current situation and the desired situation with regard to a range of ways of interacting with others. The question, as well as the answers to it, are given in detail in Appendix I-2 and in summary in Table I-10.

In reporting the type of interaction shown by the items on Table I-10, all deans state that there now exists "Participation of non-education professors on examination committees for theses" and "Interdisciplinary committees or seminars which are concerned with scholarly issues". Four of the deans report "Participation of non-education professors in the selection of the faculty of education" and "Visiting professors from other faculties of your university for teaching".

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[6] The *Ecole normale supérieure* at University C is responsible for the preparation of teachers for colleges; it is located in the faculty of education.

TABLE I-10

Q. 2.4 Interchange between schools or departments of education and other divisions in the university are achieved in a variety of ways. Which of the following arrangements now exist with 1) academic departments, and 2) other professional schools in the university: and which would you like to see established?

	EXISTS	DESIRED
a) Participation of non-education professors on examination committees for theses	6	2[a]
b) Participation of non-education professors in the selection of the faculty of education	4	1
c) Interdisciplinary committees or seminars which are concerned with scholarly issues	6	2
d) Joint teaching appointments	2	3
e) Joint research appointments	2	5
f) Visiting professors from other faculties of your university for teaching	4	2
g) Visiting professors from other faculties of your university for research	3	4
h) Other types of interchanges	2	3

[a] Note that total is 8 and that there are only 6 faculties. Perhaps this means that the procedure referred to exists in all faculties, but not necessarily to the extent desired, nor in all programs of all faculties.

A majority of deans of education indicate a desire for visiting professors for research, and for joint research appointments; in actual fact, these are not common.

Because the numbers of individuals referred to are not specified, Table I-10 probably gives an inflated impression of the amount of interchange that actually occurs. For example, one of the two faculties with joint teaching appointments is at University B; however, this university falls into this category by virtue of having two of its 92 faculty members cross-appointed, in this case, with the departments of Sociology and Psychology; the other 90 are uniquely professors of education.

It is not always easy to interact with others; the attitudes of other academics to educators is certainly an important factor. Therefore, we asked the deans:

> "In general, how fruitful have interchanges been with the academic departments in the university; what problems have you encountered, if any; and what directions would you like future interchanges to take?"

Their responses indicate that in general, they do not encounter serious problems. One dean mentioned that "(they) usually find that (they) have excellent cooperation or (they) have none at all". However, more than one dean indicated in the interview that some members of faculty outside education had a definite superiority attitude when asked to become involved with the education faculty. There appears to be an ambivalence concerning this question that probably means there is a deep-seated problem prevalent that will require considerable changes in attitude before it is solved, particularly on the part of non-education faculty members.

In summary, it seems that areas of interaction are limited to those which would have the least direct impact on the actual process of research. However, it appears that a majority of deans would be in favor of changes which would improve the likelihood of increased research productivity in the future. Of course, these stated desires are undoubtedly contingent upon increased allocation of resources to faculties of education so that they may divert a larger part of their energies to research activities.

Opinions about Educational Research

In an attempt to learn about the attitudes of the people concerned with any aspect of research in education, we made use of a modified item from the survey of Sieber and Lazarsfeld[7], and incorporated it into all of our questionnaires. The item appears to the head of Table I-11, which shows two things: first, if an item was selected a check mark indicates selection; second, where a number occurs rather than a check, it indicates that the item was ranked first, second, or third, as indicated, in importance for the long-range improvement of education.

There is a remarkable degree of unanimity among the deans as to what constitutes educational research. The dean at University D and the dean at University E are the only ones to select an item that was not selected by any other dean, and in fact the dean at University D rejected only three of the twelve items. There is complete unanimity in selecting five of the listed items (e, g, h, j, and k) and in rejecting two of them (f and l).

Deans were asked to indicate their answer to the following question:

> "Which of the activities do you feel are the most important for the long-range improvement of education, regardless of whether you have checked the activity as "research".

We have summarized their reaction to this question on Table I-11. Thus, "General psychological studies of human learning and development" was checked as of first importance by the dean at University A, and tied for first with "Investigating factors which affect the teaching-learning process in the classroom" by the dean at University B; however, this item was not included among the three most important at any of the other four universities. "Evaluating the effectiveness of new curricula and methods" is ranked of second importance by three deans, and all deans consider it as belonging to the definition of educational research.

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[7] Sieber, S. & Lazarsfeld, P. *Op. cit.*, p. F 43-3, item 1.12

TABLE I-11

Q. 2.1 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"? (Check as many as you wish.)

Q. 2.2 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research".

	UNIVERSITIES					
	A	B	C	D	E	F
(a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies"				3[a]		
(b) Designing new curricula and methods of instruction			✓	1	3	1
(c) Evaluating the effectiveness of new curricula and methods	✓	2	✓	2	3	2
(d) Local school surveys			3	✓		
(e) Investigating factors which affect the teaching-learning process in the classroom	3	1	✓	✓	✓	✓
(f) Disseminating new curricula, methods of instruction or other school practices						3[b]
(g) Investigating factors which affect school administration	✓	3	✓	✓	✓	✓
(h) General psychological studies of human learning or development	1	1	✓	✓	✓	✓
(i) Presenting evidence to legislators of the need for greater support for the schools					✓	
(j) Developing new test and measurements	✓	✓	✓	✓	✓	✓
(k) Analyzing the key concepts or philosophical assumptions underlying current educational issues	✓	✓	✓	✓	2	✓
(l) Studying educational research journals for lecture materials						
(m, n) Other answers	2		1		1	

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[a] Numbers indicate order of importance of item to long-range improvement of education.

[b] This item was ranked in importance for the long-range improvement of education, but was not indicated by the dean as included in the term "Educational Research".

The table shows that the deans select item (b), "Designing new curricula and methods of instruction" and item (h), "General psychological studies of human learning or development" as the most important for the long-range improvement of education, with item (c), "Evaluating the effectiveness of new curricula and methods" as a close second. Another item selected more than once is item (e), "Investigating factors which affect the teaching-learning process in the classroom". A small element of cultural difference may appear in the fact that the three English-language universities select item (c) "Evaluating the effectiveness of new curricula and methods" as second choice, but only one of the French-language university deans of education select that item at all and then as a tie for third choice.

Items (m) and (n), in the last line on the table, refer to additional items which some deans felt should be included in a definition of educational research. Thus, m) at University A was "History of Education, Comparative Education and Sociology of Education", at University C: "Futurology and Planning" and at University E, "Teacher training, effectiveness of what is being done, evaluation of aptitude before embarking on training". The dean at University C also included an item n), "Transformation of attitudes of Society, Teachers and Administrators vis à vis new realities such as new technologies".

Preferences of Deans for Backgrounds of Prospective Faculty Appointees

Another item intended to uncover the attitudes and policies of the deans is dealt with in Table I-12 in summary and in Appendix I-3 in detail. Deans were asked to express their preference in terms of the background of new faculty members of presumed openings in various fields. The response items made it possible for deans to indicate preference for new faculty trained in a faculty of education, in a non-education faculty, or in the field through experience.

TABLE I-12

Q. 2.3 If an opening occurred for someone to teach a graduate course in each of the major fields listed below, which of the following persons would you prefer to hire?

	UNIVERSITIES					
	A	B	C	D	E	F
Academic Training from Faculty of Education Preferred	6	18	3	10	5	9
Academic Training outside of a Faculty of Education Preferred	7	0	12	3	6	7
School Practitioner with Great Deal of Experience Preferred	0	1	1	1	2	0
Total Responses	13	19	16	14	13	16

From the responses of the deans, it is evident that those at the English-language Universities (B, D and F) are more concerned with appointing someone with an academic training and background supplied by a faculty of education than are the other deans, whose preference tends to new appointees from non-education faculties; the differences between the two groups of universities is statistically significant ($X^2 = 15.4$, df = 1, $p < .01$.).

It is interesting to compare these stated preferences with the actual situation as described in page 20, in which there is no evidence of such a strong difference in the actual training background of current faculty members along language-division lines. However, the stated preference of the English-language deans for staff trained in faculties of education probably indicates a preoccupation with teacher preparation rather than with research.

Another way of studying the preferences of the deans for training in prospective faculty is to classify their responses as to the area in which the new member is expected to teach. This is presented in Table I-13.

TABLE I-13

PREFERENCE FOR BACKGROUND OF APPOINTEE RELATED TO SUBJECT AREA CLASS IN WHICH HE IS TO BE APPOINTED

	UNIVERSITIES					
	A	B	C	D	E	F
DISCIPLINES	4	1 & 2	4	1 & 5	1 & 5	2 & 4
CURRICULUM & METHODS	2	1 & 2	4	1	3 & 5	2 & 4

1 A professor trained in a school of education who has mostly taught in the field.
2 A professor trained in a school of education who has mostly done research in the field.
3 A professor trained outside a school of education who has mostly taught in a related field.
4 A professor trained outside a school of education who has done research in a related field.
5 A school practitioner who has a great deal of experience in the field.
6 No particular preference.

At Universities B, C, and F, the deans prefer similar backgrounds for all of their professors regardless of what they will teach; however, the deans at the other three universities prefer somewhat different backgrounds for curriculum and methods professors as compared to that for those in the academic disciplines.

Arrangements for Research and Service

Faculties generally have teaching and research responsibilities. However, because a faculty of education has professional duties, it is concerned not only with teaching and research, but also with helping to service the on-going work of the educational community in a variety of ways. If the research productivity of faculties of education is lower than that of academic faculties, one very important reason may very well be the weight of responsibility for service activities.

To check on this possibility, the deans were asked: "To the best of your knowledge, how many faculty members in your faculty or department are presently providing field services to local school systems (i.e. school survey, consultation, test scoring or administration, or workshop and in service courses)? How many are doing research?"

TABLE I-14

Q. 3.1 To the best of your knowledge, how many faculty members in your faculty or department are presently providing field services to local school systems? How many are doing research?

	UNIVERSITIES						
	A	B	C	D	E	F	TOTAL
SERVICE	10	15-20	the majority	2	± 15 (all)	a	42-47
RESEARCH	22	6	the minority	1	6	a	35

a Connections with the educational community were just being established at the time of the interview and faculty members were just arriving. The dean expects that both research and service activities will develop.

Table I-14, which summarizes their answers briefly, indicates that services and research constitute actual activities of some faculty members at all universities, except University F. It is interesting to note that with the exception of University A, the number involved in service is always greater than that involved in research. It appears, therefore, that the needs of the educational community may be contributing factors in the low research productivity of members of faculties of education; this feeling is expressed strongly by the dean at University E who feels that too much time is being spent on superficial tasks, thus preventing highly qualified individuals from making a greater contribution in the long run.

Deans were given the opportunity to express their wishes in regard to the ideal balance between service and research. No replies to this particular question were given by four of the deans; but the two who did deal with the issue were in agreement that the research-to-service ratio should be altered in the direction of increasing research.

Means of Encouraging Faculty Members to Do Research

Altering the balance in favour of research, however, generally requires some sort of arrangement which will encourage this. With this in mind, we asked the deans in what ways faculty members are encouraged to do research. Table I-15 summarizes their replies to this question.

TABLE I-15

Q. 3.2 Are faculty members encouraged to do research

	UNIVERSITIES					
	A	B	C	D	E	F
a) through smaller teaching load during the academic year	yes	yes[a]	yes[d]		yes[f]	yes
b) through exemption from committees, practice teaching, administrative or similar duties	yes	yes[b]	yes[e]	yes	no	yes
c) through extra pay for research during summer	yes	yes[c]	yes	no	yes	yes

a slight modifications
b taken into account
c one member
d students at the doctors' level: yes, otherwise no request
e yes, if a request were made
f yes, if work towards academic degree.

Table I-15 shows that in almost all cases, some concessions are made to encourage professors to do research.[8] However, difficulties are encountered by some deans in doing so. One indicates that all faculty of education members would have to be relieved of a significant part of their teaching, supervision and tutoring responsibilities if their load was to be reduced to that of other faculty in the same university. By contrast, the dean at University F indicates that none of his faculty members is working as much as required for a "normal" teaching assignment for his university, and he justifies this to the university administration on the grounds that members of faculties of education have professional duties in addition to the more usual duties of professors.

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[8] Of interest here is the fact that a very similar item was also posed to faculty members, and their responses tend to reveal some difference of perception. See Table II-24 which appears in Chapter II.

Our information with regard to the question:

> "How seriously have the teaching resources of the graduate school or department of education been strained by allowing a smaller teaching load for individuals doing research?"

is incomplete. However, what we have suggests that apart from University A, where the dean reports "a little", resources are not generally strained by research activities. The dean at University E points out what may well be a general reason for this, when he indicates that his faculty are overworked for reasons other than the pursuit of research.

Further to the relationships between research and teaching, the deans were asked:

> It is sometimes said that teaching commitments seriously interfere with a professor's research efforts. On the other hand, it is argued that a researcher should also teach so that students will benefit from his research work. How do you personally feel about this issue, and how is it handled in your institution?

There appears to be little variation in the situation as it now exists in the universities. Our information suggests that only one professor of education in the whole province was engaged exclusively in research at that time in any of the universities, although the dean at University F said: "It would fit with my philosophy to have some staff members doing only research".

Each dean agrees that research activities help the professor to be a better teacher, but all except the dean at University F feel that research exclusively would not be a good thing. Thus, the dean at University B supports the idea that "a research-oriented teacher becomes a better teacher, a more alive teacher, a more alert and challenging teacher", but the primary assignment of that faculty is revealed when he states, "in our present state of growth I would like to feel that, even if a person gives only one course, he had some commitment to the preparation of teachers."

In summary, it can probably be said in general that while the deans at the six Quebec universities studied are not opposed to research, - in fact, that they make concessions to researchers, - their primary orientation to teacher-preparation and the demands for professional service to the community make it difficult for them to offer as good incentives to many of their professors, as in non-professional faculties. The only clear exception to this generalization is University F.

We were interested to get some indication of commitment to research on the part of the university and the faculty by asking the question:

> "To the best of your knowledge, about what proportion of the faculty in the graduate school or department who have taken sabbaticals in the past five years have conducted research while on leave?"

The answers at Universities C and D indicate none; and since the formation of the faculty at University F was recent, the question did not apply. University A reported one professor, University B one, and University E reported one professor that year and one next. In addition, the dean at University B reported that since some others were on leave pursuing work towards advanced degrees, there might be research involved, but these were not strictly speaking on sabbatical leaves. The dean at University E expressed the hope that a system of two teaching semesters followed by one in which the researcher would be free to refresh his knowledge or to do research could soon be instituted, since it was in effect in other faculties at that university.

Looking ahead to Chapter II,[9] we find that faculty responses indicate a much higher use of the sabbatical for research if we include the pursuit of the doctoral thesis, but still only ten per cent had even taken the trouble to apply for sabbaticals. There appears to be some lack of awareness on the part of the deans concerning faculty activities in this regard.

The deans also reported only one case where a faculty member received a leave of absence without pay to do research, and it was used to complete doctoral studies.

Types of Research Favoured by Deans

Table I-16 summarizes the number of responses made by deans to questions relative to the research they would like to see undertaken in their departments. A more complete set of data giving responses by universities appears as Appendix I-4. The table arranges the research areas in terms of the frequency with which they were checked by deans.

In all cases except three, there are no differences along the language lines in the choice of areas. The three cases are: Guidance and Counselling, selected by all English deans but by no French deans, and Curriculum in Reading, and Tests and Measurements, both of which are selected by all French deans and only one English dean.

Hence, we can report a general concern in a variety of curriculum areas such as Mathematics, Social Sciences, Business and Distributive Education, Natural Sciences and Physical Education; in addition, half the deans would like to see more work undertaken in languages.

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[9] Cf. p. 107

TABLE I-16*

Q. 3.10 In which of the following areas, if any, would you like to see more research undertaken in the graduate school or department of education? (Check as many as you wish)

AREA	NUMBER OF DEANS CHECKING	
Curriculum in Mathematics	5	
Curriculum in Social Studies	5	
Educational Administration	5	
Methods of Instruction	5	
Special Education	5	
Teacher Personality	5	
Curriculum in Business and Distributive Education	4	
Curriculum in Natural Sciences	4	
Curriculum in Physical Education	4	
Curriculum in Reading	4	(3 French)
Tests and Measurements	4	(3 French)
Comparative Education	3	
Curriculum in Foreign Languages	3	
Curriculum in Other Language Arts	3	
Guidance and Counseling	3	(all English)
Psychology of Learning	3	
School-Community Relations	3	
School Finance	3	
Adolescent Development	2	
Child Development	2	
History of Education	2	
Research Methodology	2	
Teaching as a Profession	2	
Talent and Creativity of Students	1	

* Original data appear in Appendix I-4

While these represent aspirations on the part of the deans, they are poorly reflected in the actuality reported by members of faculty in Chapter II (Table II-40, p. 123).

Non-curriculum areas in which half or more of the deans would like to see more research include Educational administration, Methods of instruction, Special education, Teacher personality, Tests and

Measurement, Comparative education, Guidance, Psychology of learning, School-community relations, and School finance.

Deans are in general more in favour of increased research in curriculum than in non-curriculum areas. Table I-17 summarizes this. To examine the significance of the difference, we have adopted the following arbitrary classification procedures; if four or more deans desire more research, this is considered a high preference category; conversely, three or fewer respondents indicates low preference. Whereas six of eight curricular areas (75 per cent) are checked by four or more deans, only five of sixteen (31 per cent) non-curricular areas are so checked. This difference is statistically significant ($X^2 = 3.8$ using Yate's correction for continuity, $p < .05$).

TABLE I-17

Preference on the Part of Deans for Research in Curricular as Compared to Non-curricular Areas

	AREA	
PREFERENCE	Non Curricular	Curricular
HIGH	5	6
LOW	11	2

Some deans offer suggestions about future needed research in areas not included in the question. These areas are: adult education, computer assisted instruction, English, school psychology, school and vocational information, educational philosophy and theory, and finally, educational technology.

In view of the fact that this survey focuses on whether faculties of education are oriented towards research or not, it is interesting to note that research methodology was selected by only two deans as an area in which they would like to see more research.

Involvement of Administrators in Faculty Research

Deans were asked about their own attitudes, and about those of their faculty, concerning the involvement of administrators, - deans and department heads, - with the research of faculty members. The data which summarize their answers appear in Table I-18.

TABLE I-18

Q. 3.12 Administrators at the school or departmental level may become involved in the research of faculty members in several ways, and the amount of involvement may vary greatly from school to school. Which of the following statements best expresses your own view of the appropriate role for administrators regarding faculty research; and which best expresses the view of most of the faculty.

	UNIVERSITIES					
	A	B	C	D	E	F
Administrators should facilitate, actively encourage, and direct the faculty research program						
Opinion of dean						
Faculty opinion as perceived by dean						
Administrators should facilitate and actively encourage faculty research, but should leave direction to the faculty						
Opinion of dean	✓	✓	✓	✓	✓	✓
Faculty opinion as perceived by dean		✓		✓		✓
Administrators should only facilitate faculty research						
Opinion of dean						
Faculty opinion as perceived by dean	✓		✓		✓	

In replying to the question about the involvement of administrators in the conduct of research, the deans are completely unanimous in their opinion that administrators should facilitate and actively encourage faculty research but should leave direction to the faculty. However, the dean at University E makes a distinction as to the level of administrator who should actively encourage faculty research, leaving this role to the department head. In his opinion, the proper role for the dean is that he "should only facilitate faculty research". In addition, the dean at University C qualifies his statement by indicating his belief that deans should have the opportunity to structure research in the faculty, so that it would not be left entirely to the individual initiative of professors. For example, he feels that research bureaus as structures not included in teaching departments would provide greater opportunities for professors to direct themselves in research, rather than having administrators attempt to direct research.

Table I-18 also shows that deans were asked what the feelings of their faculties are in this regard, and here a marked difference emerges in the report of the deans. The three English-language deans perceive that their faculty members agree with the position that they have taken in this regard, while the French-language deans[10] indicate the belief that their faculty desire more independence and perhaps less administrative interference in their research activities. This might imply that the English-language deans feel that their faculty members tend to identify more closely with the dean as one of their own number who happens to have additional administrative responsibilities, while the French-language deans are regarded by their faculty members as administrative officers who must pursue a carefully separated series of objectives that does not allow them to be directly involved in the research programs, other than to facilitate them.

Referring to the question about what the role of administrators should be in faculty research, deans were asked:

> "Which of the above alternatives best describes the present role of the administration in the graduate school or department of education?"

Their answers to this question indicate an exact correspondence between what they feel the situation should be, and what they believe it is.

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[10] Except dean at E.

Research Budgets in Faculties of Education

Deans were asked:

"Is there a "research" item on your faculty's budget?" Their answers are summarized in Table I-19.

TABLE I-19

Q. 3.13.1 Is there a "research" item on your faculty's budget?

UNIVERSITIES					
A	B	C	D	E	F
yes	yes	no	no	no	no
$10 000	"small"				

Table I-19 indicates that only two deans reported the existence of a "research" item on the faculty budget.

However, it should be borne in mind that funds for research are not necessarily identified as specific items on the faculties' budgets but may be included in the salaries of researcher professors, assistants, office personnel, and the like, or in sums granted to individual professors for particular projects.[11]

Wishes of the Deans for Future Research

We attempted to have the deans indicate the direction of their wishes, by asking the question:

> "If your graduate school or department of education were to receive about $200 000 for facilitating or conducting educational studies, or for preparing researchers, how would you like to see these funds used?"

The dean at University A would attempt, together with his faculty, to identify four or five research themes; he then would have a project designed for each theme and a program of graduate studies established in connection with each project. Students would be attracted to these programs through appropriate information. Twenty per cent of the budget would be set aside for general services to research. Thus, graduate studies and research would be intermingled for a number of students, thesis work would be coordinated and probably as a result, become more meaningful. In addition, research training would be more systematic, and more elaborate projects might be achieved at a lower cost, with students participating in research as part of their training. Also, new research areas could be explored in depth and for longer periods.

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[11] For example, University D considered the research professor's salary as part of a research budget. A first draft of this chapter was submitted to the deans. One of them informed us that there has been a moderate increase in the faculty research budget, since that time. From another faculty, we have learned that the research budget has been discontinued.

The most comprehensive reply is made by the dean at University B, in that it includes ideas mentioned by any other dean who replied. Among his wishes is that his staff would be expanded so that individuals would have more time for research and so that he might engage a few people whose interest is primarily in research. Experts in research design and statistics would be included. The goal would be to enable the faculty to undertake a major project as well as to support the projects of individuals, and to add a research facility that would be available to outside agencies. Included would be the purchase of equipment essential for research being done on a permanent basis. In addition he would like to make small grants for research assistants, thus strengthening the research work done by members of staff with the assistance of graduate students.

At University C, the dean suggests that the money would enable his faculty to design a number of research projects, and to obtain equipment for them. Also, he would be in favour of using the money to hire fifteen to twenty research assistants, so that projects would be in the hands of teams, rather than left entirely to individuals.

The dean at University D would use the money both for facilitating research and for training researchers. The dean at University E would undertake a large-scale study in all French-speaking Canada on the evaluation of teachers, while the dean at University F "would like to see (the) funds used to help to establish an experimental teacher training program".

The question was asked:

"What structural arrangements exist in your faculty for research?"

The dean at University A replies that there are at least three research units in his university: a *Centre de didactique* (involving fifteen faculty members), one in reading (with two), and one in physical education, (with six). While he indicates no personnel associated with research bureaus of any kind, the dean at University B informs us of the existence of a research committee in his faculty. Whereas all other deans report no faculty members associated with research bureaus, two agree that this would be desirable, and the dean at University C informs us that some unit is anticipated there.

Again, moving from the actual to what would be desirable, we asked deans to indicate what they feel the functions of research bureaus should be. Table I-20 presents the pattern of their answers in order of priority.

TABLE I-20

Q. 3.18 Do you personally feel that a research bureau should primarily:

	UNIVERSITIES					
	A	B	C	D	E	F
Facilitate the research of non-bureau faculty	3	1	1	2	2	
Facilitate the research of individuals on the bureau staff	2	3	3		3	
Pursue a program of research which has been formulated by the bureau as a unit	1	2	2	1	1	1

It is obvious that the deans support the third alternative - to pursue a program of research which has been formulated by the bureau as a unit - more than any other; and it should be noticed although we cannot account for it, that Universities D and F, which have not long been producing graduate research students in education from a full-time program, give this option highest priority.

The information resulting from a follow-up question asking about any plans to found such a bureau within the university in the future was largely negative. Only at Universities A and C, were bureaus being planned. The dean at University D was in favor but said that it would "depend on the possibilities". While he could specify no actual plans, the dean at University E asserted that "Everyone agrees with it, and it will certainly happen". Other than this, there was no indication of any definite plans to found research bureaus.

Background of Deans

This section of this chapter is related to information centered around the professional history of the deans themselves. We have indicated their responses to a number of questions on Summary Table I-21. The precise questions may be found in the questionnaire, Appendix I-5.

SUMMARY TABLE I-21

POSITIONS HELD IN THE PAST, OR CURRENT ACTIVITIES RELATED TO PUBLIC EDUCATION, UNIVERSITY, AND RESEARCH, BY THE SIX DEANS

POSITION HELD, OR CURRENT ACTIVITIES	UNIVERSITIES					
	A	B	C	D	E	F
Teacher	✓	✓	✓	✓	✓	✓
Principal	✓	✓	✓			
Administrator				✓	✓	
Guidance Counselor					✓	
Full-time researcher						
Staff member of research organization						
Conducting research at present	✓		✓			✓
Has taught research methods			✓			✓

Table I-21 shows that at some time or other, all six deans have been employed as teachers, and half as principals. In addition to this, one served as an administrator, and another as guidance counsellor. One dean, at University B, has worked in the Department of Education for twelve years. Thus, the deans appear to be well-oriented toward public schools in terms of their experience.

We wanted to arrive at a picture of the research experience of the deans and composed a number of questions that were designed to develop this for us. The most important of these questions was:

> "Aside from the work on your dissertation, what has been the longest period of time during which research was your primary activity?"

The coding for the responses to this item was as follows: 1. at no time was research my primary activity; 2. one to six months; 3. seven to twelve months; 4. thirteen to twenty-four months; 5. more than twenty-four months. Every dean checked out response No. 1. None had ever been a staff member of a research organization.

Summary Table I-21 shows that only half of the deans are currently engaged in research, one of these at present writing a book. Of the other two deans who indicate that they are engaged in research, one specifies that his research consists of directing students in the Master's and doctoral program. It would appear that, by contrast to their teaching and administrative experience, the deans have no extensive background of experience in research; it would appear in our judgement that they have been selected mainly on the basis of their background and expertise vis-à-vis teacher preparation, and not for their capacity to do research. While it does not necessarily follow that they will therefore be antagonistic to research, it does seem likely that their positive orientation to the research activities of their faculties is less than it might be, were their backgrounds more related to research. It may be that the qualities required in leadership for teacher training and research are not likely to be found in the same person.

Professional organizations frequently provide a forum for the presentation and discussion of research papers. For this reason, we asked the deans to indicate the organizations in which they are active members (Table I-22).

There is only one organization (CAPE) in which a majority of deans are members; additionally, there is only one other in which half of them are members.[12] If the annual meetings of such organizations have as a major purpose the presentation of findings from recent research, then the fact that deans do not seem to belong to the same organizations makes it unlikely that their membership in these organizations will provide them with many opportunities to discuss research issues with one another.

Plans for Increasing Research Activities

As we have already pointed out, lack of experience and involvement of deans in research does not necessarily prevent them from encouraging others to do research. In response to the question:

> "Do you have at present any specific plans for increasing the research activities of your faculty?"

the dean at University A points out that through the streamlining of committee activities and coordination of teaching by merging departments, more time is being made available to faculty members which could be used for research. In addition, he notes that a policy has been established for the employment of students as teaching and research assistants, thus enabling more faculty time to be released for research activities. But he mentions two problems that are being encountered:

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[12] One of the deans informed us of a committee of the Conference of Rectors and Principals of Quebec Universities at which all deans of education can discuss problems of the organization of educational research.

TABLE I-22

Q. 5.12 In which professional associations are you most active?

	UNIVERSITIES					
	A	B	C	D	E	F
Canadian Association of Professors of Education	✓	✓	✓			✓
Association canadienne-française pour l'avancement des sciences	✓		✓			
Association of Quebec University Professors of Education		✓	✓			
Canadian Mental Health Association	✓	✓	✓			
Canadian Education Association	✓	✓				
Canadian Educational Researchers Association	✓		✓			
Provincial Association of Protestant Teachers		✓		✓		
Association canadienne des éducateurs de langue française			✓			
Association d'éducation du Québec	✓					
Association internationale de pédagogie expérimentale de langue française			✓			
Canadian Council of Research in Education			✓			
National Council of Teachers of English		✓				
Quebec Association of Protestant School Administrators		✓				
Quebec Association of Teachers of English		✓				

the one is the difficulty of bringing inexperienced professors together with those who are experienced in research; the second is the shortage of funds for research.

The dean at University B makes no mention of specific plans for increasing research activities of his faculty. At University C, the dean indicates his intention to obtain two new professors whose specialty would be the uses of the computer, and this would improve the research situation in his faculty. The dean at University D is hoping to hire an additional professor capable of educational research. Some plans for an interdisciplinary research center for the whole of University E are being formulated, and the dean indicates that a few of his professors would be involved with this. At University F, the dean indicates that he has an expanding department and that he would take research capabilities into consideration in the hiring of new professors.

We tried to obtain from the deans some sense of direction to pass on to the sponsor of this inventory, the Institute of Research in Education. We asked

> "Among other things, I.R.E. has been established to facilitate educational research in the province of Quebec. In your opinion, in which ways could I.R.E. contribute substantially to educational research?"

The deans of three of the universities, A, C and F, indicate a desire for financial support from the I.R.E. for research, and one of these feels that the Institute could render useful service by providing information about research being undertaken in Quebec. However, by way of contrast, the dean at University E finds that, in view of the large number of publications already available, it would be unwise for the I.R.E. to invest some of its small resources in a publication, no matter how excellent.

In addition to these points, the dean at University A feels that the I.R.E. should favour the creation of research centers at the faculties of education. He also thinks that the Institute could upgrade research in the province by offering research courses, and by receiving researchers-in-training into the projects of the I.R.E. itself, to provide practical research experience.

The dean at University B suggests that the assistance of a research design expert provided by the I.R.E. would be of considerable value to researchers in the province, at least until such personnel could be obtained by the faculties themselves. The dean at University C wishes to have a Review of Educational Research in Quebec started, and feels that the Institute should plan research, provide grants to students, arrange a better integration between I.P.E. and the faculties. He also desires that the statute setting up I.R.E. be revised so that it become more like the Ontario Institute for Studies in Education. At University F, the dean advocates sponsored research on particular projects in terms of I.R.E.'s priorities. Finally, the dean at University D suggests that a central library for all the faculties of education in Quebec would be helpful.

In response to a question about the activities of the I.R.E. to the date of the interviews, the deans at Universities B and F feel that the I.R.E. has made some useful contributions, while the dean at University C thinks that the work of the Planning Committee for the Development of Educational Research, a consulting group working with I.R.E., should be better publicized. Also, he finds, as does the dean at University E, that the I.R.E. Bulletin was an excellent beginning; however, he suggests that more information on the availability of grants, and on the requirements for the presentation of requests and reports, would be an improvement.

The dean of University A regrets that I.R.E. has been unable to offer more funds, but agrees that the several small projects which are being supported by the I.R.E. provide a good beginning in research for his faculty. In contrast, the dean at University E has the impression that the I.R.E. may to a small extent have scattered its resources in too many small projects. Both these deans feel that the I.R.E. has yet to solve its problems in terms of priorities; in fact, the dean at University E suggests that this is for the I.R.E. the most important problem.

One of the deans finds that it is really too soon to evaluate the work of the I.R.E. In summary, it is clear that most supported the idea of an I.R.E. for Quebec.

SUMMARY AND CONCLUSIONS

The purpose of our interview with the deans of the six Quebec faculties of education was to obtain from them their perception of the present condition and the future of educational research in their faculties, which would assist us, taking all their answers together, to develop some ideas about the future of educational research in the province as a whole. We therefore asked them questions about their students, the programs and policies of their faculties relating to research and other activities, and about themselves, their background, training, interests, and opinions relating to educational research. Their answers form the basis of the information summarized in this section of this chapter. It must be borne in mind that the statements made here refer to Quebec as a whole, and in the case of almost every statement some particular faculty will be exceptional.

Students

The responses of the deans indicate that for the province as a whole, only one graduate education student in six was enrolled in a program in which research training and experience would result because of the requirement to produce a thesis. Further to this, it was found that of this group for whom the thesis was required, only one in eight was working at the doctoral level. This indicated that at the time of the survey in 1968-1969, less than three per cent of graduate students in education were committed to pursuing research at the level of sophistication required for the doctorate. In the light of this information, we are forced to conclude that the outlook for the future production of educational research in this province is rather bleak.[13]

An attempt was made to discover why such a small proportion of graduate students in education was involved in research. One fact which came to light was that under one per cent of these students work as research assistants. This seems to be related to the fact that research careers are not foreseen for even a small proportion of graduate students in education. The great majority are preparing to work in public school systems. On the whole, it seems that graduate training in education is much more frequently motivated by a desire for advancement in public education to administrative or specialist posts than by a desire to carry out research. According to the deans, virtually none of the graduates of recent years preceding our survey had moved on to research posts, and they informed us that they had not received requests for candidates for research posts in the previous three years. The lack of emphasis on research at the graduate level in education, therefore, seems to be related to a lack of demand for researchers in education.

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[13] Of course, like other provinces or states, Quebec is not entirely dependent upon its own institutions of higher learning either for the production of a well-educated population or for the development of a corps of well-qualified educational researchers large enough to meet its own needs. However, the province has made a commitment to the upgrading of its entire educational system and it seems to us that a capacity to produce educational researchers must be an important part of that commitment. It is true that many of the educational researchers currently working in the province have been trained elsewhere, and it will probably always be advisable to recruit a significant proportion of researchers from the outside no matter how efficient our own production becomes. To avoid being overly dependent upon other societies, we will need to be in a position where a substantial part of our own needs for educational researchers can be met locally. In addition, a proportion of the educational researchers that we produce will go elsewhere to pursue their careers. In this regard, we feel that Quebec, like other provinces and states, must be in the position to import and to export educational researchers.

However, it must not be forgotten that Quebec is linguistically unique in North America; this may impose difficulties for English-speaking researchers from the United States for example, who might otherwise like to work at Laval University or the University of Montreal. Furthermore, we should be careful to provide adequate opportunities for the training of researchers in French in Quebec, to accommodate those for whom language difficulties in English-language graduate schools might be a serious problem.

Graduate students who learn research skills often do so as a result of a great deal of individual or small-group contact with a professor who has an on-going research project of some kind. (As we will assert later, this is also true in the case of Quebec students.) Because of this, we attempted to determine the extent of the contact graduate students in education had with their instructors.

We have already shown that fewer than one in one hundred graduate students in education hold the post of "research assistant" and this is probably the closest thing to a research apprenticeship system that has been devised in universities. The lack of personal contact of students with professors seems to result in fact from high student-teacher ratios; the proportion of students to professors in graduate education programs are often higher than is desirable even at the undergraduate level.

One way of overcoming this high student-professor ratio is through the use of visiting professors for summer school programs and while this expedient may solve the problem of filling the need for courses, it does not provide the kind of long-term contact between professors and students that would lead to much collaboration with regard to research projects; we know of no summer school graduate programs which last longer than six weeks.

Another solution to the poor professor-student ratio in graduate education programs is collaboration with other faculties. While this is common in French universities, in which graduate students in education are required to take courses in other faculties, it is rare in English universities. There appears to be some ambivalence among the deans of education about the quality of contact obtained through interaction with non-education academics, and this seems to result from the unwillingness of certain other academics to associate themselves too closely with professors of education in a professional capacity. Professors of education sometimes have low prestige in the universities, and may be somewhat sensitive to what they interpret as attitudes of academic superiority on the part of other professors.

There is only one area in which interaction with members of other faculties is almost universal, and that is in the area of thesis-evaluation. However, it must be pointed out that this form of collaboration with professors of other faculties applies only to a small minority of students and does not involve personal contact of student and professor. Unless the student fails his first submission, this collaboration often comes too late in the research process to result in the external professor's having any direct influence on the quality of the research or on the research training process.

Faculty

A majority of the members of the faculties of education are not engaged in research themselves, as our interviews with the deans revealed; it is therefore not difficult to understand the low level of commitment to research among graduate education students. It seems that there are many factors which do indeed make research as a major commitment for members of faculties of education difficult if not impossible.

Overall, deans express a preference for professors of education to have obtained most of their academic training for their higher degrees in schools of education, rather than in academic graduate departments. In view of the history of the development of schools of education, and the fact that the emphasis on research in many of these schools is a recent development, we may be involved here in some kind of self-perpetuating cycle that cannot be broken unless many new faculty members are recruited from among the graduates of non-education faculties. Yet, we observe that while the French deans as a group are favourable to hiring new faculty from among non-education graduates, the deans of the English universities expressed a strong preference for new professors with graduate degrees in education. This probably reflects a theme that has run through all our sources of data; with the exception of University F, which has a new and small department of education, the English faculties of education are overwhelmingly concerned with teacher-preparation. This being the case, the concern of the English deans for professors with graduate education background is understandable; however, the implications of this for the production of researchers are clearly negative, in the light of our self-perpetuating cycle hypothesis.

The need of the educational community for services of various kinds (in-service training courses, workshops, consulting, etc.) results in pressures in addition to the normal teaching responsibilities which absorb the time and energy of professors of education that might otherwise be devoted to research.

The small number of professors of education who have had sabbatical leaves may indicate a lack of interest on the part of the faculties who would not encourage independent study in this way. Another way of interpreting these data is that faculty members themselves have a limited concern for research, and do not take advantage of sabbatical policies. Also, in those very few cases reported, the research done during leave was simply that which completed the thesis requirement for a Doctor's degree.

In summary, it appears that by training, background, present experience, and current activities, the great majority of education faculty members are better oriented to the preparation of teachers, specialists, and educational administrators than to the production of either research or researchers.

Deans

The deans were asked to provide information about their own backgrounds and to explain their attitudes concerning their own roles, and those of their professors.

Five of the six deans have at some stage of their careers been teachers in school systems. Among the other posts held by them were principal of schools, other administrative posts, guidance counsellor, school inspector and subject supervisor in the provincial Department of Education. It can be concluded that they are very well oriented in terms of experience to teaching, but this can not be said for their orientation to research. Apart from thesis research, none has ever spent as much as a half year in which research was a major responsibility, and none has ever been a staff member of a research organization. Further, only two of the six have taught courses in either research methods or statistics.

Not only is the background of deans found to be less related to research than to teaching, but the current research activities among deans is at best scanty. Only one dean was currently involved as principal researcher in a research project of an empirical nature. Because of the heavy demands of administering the faculty, it may be unreasonable to expect deans to conduct any research personally. But what seems to us more likely to explain this small commitment to research is that the education deans, like their own faculty members, have been recruited or selected largely on the basis of their background and experience which would qualify them best for teacher preparation.

As a result, their attitudes to research might have been expected to be less positive than might otherwise have been.

Despite the foregoing speculations, the deans are positive in their attitudes to research. They agree that research activities help to make the professor a better teacher. This is reflected in a number of concessions they have made in terms of lighter work load, by the reduction of committee and practical teaching supervision duties to professors who were involved in research. However, in view of the demands for teacher preparation and other services to the educational community, we interpret the deans' remarks to indicate some difficulty in offering really strong incentives to conduct research, particularly in view of limited resources.

The limited resources can be inferred not only from general statements made by the deans, but also from specific information provided. For one example, only two faculties of education had research items on their budget, and these tended to be very small. For example, the largest faculty research budget reported was $10,000. For another example, only one faculty had functioning research centers or units, and there was only one other university at which future plans included the intention to create such centers or units.

The positive attitude of deans to research may also have been dampened to some extent by the attitudes of their professors. This seems especially likely on the French side where deans believe that their faculty members desire of them to facilitate research only, but not to encourage it actively.

Research topics considered important by deans differ a little on language lines also, with English deans expressing an interest in research in Guidance and Counseling, whereas French deans desire that more priority be accorded to research in Reading and in Tests and Measurements. Regardless of language, however, deans are significantly more in favour of research in areas related to school curriculum than in non-curriculum areas such as Tests and Measurements, Research Methodology, Child Development, and others.

In summary, we can conclude that deans have been selected on the basis of their background and experience for teaching and not on the basis of their orientation to research. This makes it seem likely that their attitudes to research, while not antagonistic, might be less actively positive than had some other basis of selection of deans been used. In fact, all deans but one feel that research as the exclusive responsibility for any professor of education would not be a good thing. Only one had specific plans that might result in a major increase in research activity. The amount of interaction among the six deans at meetings of Canada-wide organizations where research papers might be presented and discussed seems to be very small.

These facts about the deans themselves, together with information provided by them about their students and faculty do not give us much basis for optimism with regard to future research productivity in education in Quebec. While there is in no way any attempt here to blame the deans for our pessimism, it is interesting to note that the response of one dean to a reading of this statement in draft form does not make us more optimistic.[14]

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[14] a) One dean remarked:"...as long as the universities are restricted in the expansion of the teaching staff and have on-going commitments in teacher education, it is understandable that staff with a major research commitment cannot be engaged".
b) The closing of the normal schools will result in a heavily increased responsibility for teacher preparation on the part of the French faculties of Education.

There are factors which can help us to feel confident of improvements in the future. One of these is that the faculties of education in Quebec are relatively new; it may be that as time passes, research can become established. Another factor is the recent and continuing availability of research funds in education. Also, in response to a question as to what they would do with large research budgets, were these made available, the deans elaborated imaginative, bold research projects which would undoubtedly greatly increase the emphasis on research in the future.

Finally, it must be recalled that all the data included in this chapter were obtained from interviews with six individuals. The information included is based on our interpretation of the judgements and opinions of the deans only. Following chapters, while dealing with some new ideas, will include the observations on similar questions of large numbers of professors of education and their students, as well as those of scientists pursuing research in education from locations other than faculties of education; these include faculties of arts and science, normal schools, school boards and non-university research organizations of various kinds.

CHAPTER II

Introduction

This chapter is concerned with the background, experience, research activities, and opinions concerning research, of the members of faculties of education in the Province of Quebec who responded to the questionnaire. The presentation deals with data from the respondents in two patterns, the one descriptive and comparative, and the other analytic. In the case of the first pattern, the data are limited to the three largest universities because of the facts that the educational research activities of the three smaller universities are of such recent origin, and that their faculties of education are so small, that there is no justification in attempting to make comparisons from the information that was presented by their respondents.

In the case of the second pattern, the data which permit analysis of the relationships between the variables concerning the respondents and their research productivity, actual or potential, are drawn from respondents at all six universities. Hence, all tables comparing response patterns at the descriptive level deal with Universities A, B, and C only, and are so labelled.[1] Other tables include data from all respondents.

The data indicate differences in the recruitment of faculty of education personnel, policies regarding research, and research traditions at the three universities. As a result of these policies and traditions, the kinds of individuals in faculties of education vary in characteristics such as background, training and interests vis-à-vis research. In some senses, they are not really comparable.

Another problem results from the fact that all of the faculties include (or actually exclude) individuals of varying sub-classifications in education, as, for example, guidance counsellors, psychologists, and others. And the proportions of respondents from each of these various disciplines and fields differ markedly from one faculty to another. Even the ideas of respondents as to what activities actually constitute educational research vary systematically by faculty, as will be seen later.

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[1] The decision to label the universities by letters results from the promise of anonymity that was made to the respondents.

For all these and similar reasons, it was decided to present the descriptive information separately for the three largest universities.

The results of this survey are presented in a series of sections, each dealing with some different aspect of the description. We begin with a discussion of the definition of educational research, followed by a presentation of the background, experience, and rank of the respondents, to show how these differ in the three universities, and to determine whether these are related to research productivity. We then deal with their current activities, and move on to their opinions regarding research, and their attitudes toward interaction with faculty members and researchers in organizations other than their own faculty. This is followed by an inventory of factors related to the undertaking of research, and an analysis of the kinds of research being undertaken, and the extent of interaction with others in research. Subsequently, we deal with problems related to the conduct of research, the training of researchers, and finally, actual research productivity and plans for future research. The chapter ends with a brief summary of the analysis, and a statement of conclusions.

DEFINITION OF RESEARCH

Professors of education were asked, like our other respondents, to attempt a definition of educational research through a standard question borrowed from Sieber and Lazarsfeld. Their responses are reported in Table II-1.

No particular activity is considered by all respondents as being, or not being, educational research. The activities about which there is most consensus for inclusion in a definition of research are, in order: "Investigating factors which affect the teaching-learning process in the classroom", "Evaluating the effectiveness of new curricula and methods", and "General psychological studies of human learning or development". In addition, respondents are quite strongly in agreement that "Studying the educational research journals for lecture materials", "Presenting evidence to legislators of the need for greater support for the schools", and "Disseminating new curricula, methods of instruction, or other school practices", are not research.

The distributions of responses to all other items indicate considerable disagreement as to the meaning of educational research. The division of opinion is very striking with regard to the item "Designing new curricula and methods of instruction", the respondents being divided into two essentially equal groups. There is also substantial disagreement on the items "Analyzing key concepts or philosophical assumptions underlying current educational issues", and "Investigating factors which affect school administration".

Comparing universities (Table II-1), we observe that in general, University A has the highest agreement among its members as to which items do and do not constitute research. They include e), c), j), h) and b), and exclude i), l), f), and a). Professors at University A seem to favour mainly studies on teaching and tests and measurement, and tend to exclude from their definition of research, activities related to school administration.

Professors at University B include fewer items (and with less unanimity) in their definition of educational research than professors at the other two universities; those included are: "Investigating

TABLE II-1

Q. 54 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies".	10	24	21	36	16	41	47	34
b) Designing new curricula and methods of instruction.	27	64	19	33	25	64	71	51
c) Evaluating the effectiveness of new curricula and methods.	32	76	33	57	34	87	99	71
d) Local school surveys (curriculum, financial, plant, etc.)	13	31	15	26	21	54	49	35
e) Investigating factors which affect the teaching-learning process in the classroom.	37	88	40	69	34	87	111	80
f) Disseminating new curricula methods of instruction, or other school practices.	5	12	8	14	9	23	22	16
g) Investigating factors which affect school administration.	16	38	26	45	16	41	58	42
h) General psychological studies of human learning or development.	28	67	40	69	28	72	96	69
i) Presenting evidence to legislators of the need for greater support for the schools.	2	5	7	12	4	10	13	9
j) Developing new tests and measurements.	30	71	32	55	28	72	90	65
k) Analyzing the key concepts or philosophical assumptions underlying current educational issues.	22	52	24	41	27	69	73	53
l) Studying the educational research journals for lecture materials.	4	10	5	9	3	8	12	9
Number of Respondents	42		58		39		139	

factors which affect the teaching-learning process", "Evaluating the effectiveness of new curricula and methods", and "Developing new tests and measurements". They agree on the inclusion of "General psychological studies of human learning or development" in about the same proportion as respondents at the other two universities.

Respondents from University C believe that b), c), e), h), j) and k), are educational research. They are the only group clearly in favour of the inclusion of "Analyzing key concepts or philosophical assumptions underlying current educational issues" in the definition of educational research.

In the three universities, respondents agree in about equal proportions on the inclusion of "General psychological studies of human learning or development", on the exclusion of "Presenting evidence to legislators of the need for greater support for the schools" and "Studying the educational research journals for lecture materials". They are ambivalent as to whether "Investigating factors which affect school administration" is educational research or not.

Our conclusion is in general agreement with that of Sieber's analysis of American data - that is, there is no universally agreed-upon definition of what constitutes educational research. This finding has serious implications for the comparison of responses in this survey at different universities. For example, it may well be that what a respondent at one university considers a research project would not be considered as such at another university. We later make comparisons between respondents who, by their own definitions, have done research in the past and/or are spending time on research in the present (researchers), and all others (non-researchers). The validity of these comparisons is somewhat in question since we did not impose a definition of research upon respondents. In cases where research reported is funded, the opinions of others have been brought to bear on whether or not the reported activity really is research, and where no research is reported, our non-researcher category is almost certainly valid. In analytic terms, what this means is that our category of "researchers" may include some whose activities are not really research, but it seems quite certain that the proportion of researchers will be substantially higher among our "researchers" than among our "non-researchers". Trends reported are therefore undoubtedly meaningful, and in fact, our conclusions reflect a conservative interpretation of these findings.

This lack of consensus may indicate that researchers in education faculties do not communicate well with one another, with university authorities, or with funding agencies. In addition, it suggests possible problems in the training of educational researchers, in research methodology, in the selection of thesis topics and in the usefulness of the resulting educational research.

This result, it seems to us, also implies a need for a coming-together of researchers in Quebec to establish some basic ideas about what educational research really is, and what needs to be done.

Members of the faculties of education were asked to indicate which of the items which appear in Table II-1 are most important for the long-range improvement of education, regardless of whether or not they could be defined as research. Their responses to this query were analyzed to identify which items were most frequently selected first, second, and third, and this information appears in Table II-2.

"Investigating factors which affect the teaching-learning process in the classroom" is most frequently chosen as first and second, and "Evaluating the effectiveness of new curricula and methods" tied with "General psychological studies of human learning and development", most frequently chosen as third. There was no significant difference between the universities on this pattern. It is interesting to note that these two activities are also the ones which obtained more votes as being research.

TABLE II-2

Q. 55 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research".

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
MOST FREQUENTLY CHOSEN AS "FIRST": E	12	29	11	19	15	38	38	27
MOST FREQUENTLY CHOSEN AS "SECOND": E	10	24	11	19	6	15	27	19
MOST FREQUENTLY CHOSEN AS "THIRD": C } TIED	7	17	6	10	5	13	18	13
AND H } TIED	6	14	7	12	5	13	18	13

ACADEMIC RANK AND BACKGROUND

The academic rank of faculty respondents is compared in Table II-3.

TABLE II-3
ACADEMIC RANK OF RESPONDENTS

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professor	9	21	5	9	1	3	15	11
Associate Professor	7	17	22	38	7	18	36	26
Assistant Professor	18	43	27	47	15	38	60	43
Lecturer	0	0	2	3	11	28	13	9
Other	6	14	1	2	1	3	8	6
Total	40	95	57	98	35	90	132	95
Number of Respondents	42		58		39		139	

Table II-3 shows that 21 per cent of the respondents of University A hold the rank of Professor, whereas only 3 per cent in University C hold that rank. The proportion of Associate Professor varies from 17 per cent in University A, through 18 per cent in University C, to 38 per cent in University B, whereas about 43 per cent are Assistant Professors in all three universities.

University C is the only one with a significant proportion at the rank of Lecturer, more than a quarter falling into this category. University C has only 21 per cent of respondents in the top two ranks compared to at least 40 per cent in the other two universities.

Table II-3 A, below, shows that a (small) majority of our respondents have done or are doing research.[2] In fact, only 57 per cent of the Professors and Associate Professors have done or are currently doing, research, compared to 74 per cent of Assistant Professors and Lecturers. This difference is significant and could result from the fact that more of the latter have obtained a degree with thesis or are presently working on their thesis research.

This table also shows that research is a major activity for only a few members of the faculty: only 23 per cent of the Professors and Associate Professors and 34 per cent of Assistant Professors and Lecturers devote ten hours or more per week to it.

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[2] One of the problems of evaluating the information from respondents in this study, results from the fact that the concept of research differs by respondent (see Table II-1). If respondents who give the same answers have in mind different definitions, then those answers may not be strictly comparable.

TABLE II-3 A

ACADEMIC RANK RELATED TO RESEARCH PRODUCTIVITY

RANK	RESEARCH ACTIVITY: Having done or currently doing research		RESEARCH ACTIVITY: Ten hours or more per week on research	
	YES	NO	YES	NO
Professors & Assoc. Prof.	57%	43%	23%	77%
		$p < .01$		*n.s.
Lecturers & Assistant Prof.	74%	26%	34%	66%

* n.s. signifies that the level of probability of this pattern occurring by pure chance is $> .05$, in this and in all subsequent tables.

It seems reasonable to expect that the academic background of faculty members would be a factor in their research potential, since certain degrees have as one of their major components the requirement to do research. Information about degrees is presented in Table II-4.

The number of undergraduate degrees held by respondents is not very different at Universities A and B, but at University C there seems to be greater likelihood that a faculty member will have two undergraduate degrees than at the other two universities.

At Universities A and C, the *licence* is very prominent, but virtually non-existent at B. This probably represents a difference in the traditions of Quebec universities. The *licence* is not offered by any English-language university.

Comparing Universities A and C, it appears that A is more likely to have the *licence* requiring thesis, whereas respondents at University C are more likely to hold the *licence* not requiring thesis. Where respondents at A and C do hold the Master's, the opposite is

TABLE II-4

Q. 4 Give a complete list of your DEGREES below.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
UNDERGRADUATE DEGREES								
One	22	52	36	62	13	33	71	51
Two	12	29	14	24	17	44	43	31
Three or more	3	7	4	7	4	10	11	8
Nil	5	12	4	7	5	13	14	10
TOTAL	42		58		39		139	
OTHER DEGREES WITH NO THESIS REQUIREMENT								
LICENCE								
Completed	9	21	1	2	22	56	32	23
Course work in progress	0	0	0	0	0	0	0	0
TOTAL	9	21	1	2	22	56	32	23
MASTER								
Completed	5	12	12	21	4	10	21	15
Course work in progress	1	2	2	3	0	0	3	2
TOTAL	6	14	14	24	4	10	24	17
DOCTORATE								
Completed	0	0	2	3	0	0	2	1
Course work in progress	0	0	0	0	0	0	0	0
TOTAL	0	0	2	3	0	0	2	1
OTHER DEGREES REQUIRING THESIS								
LICENCE								
Completed	18	43	1	2	12	31	31	22
Lacking only thesis	1	2	0	0	1	3	2	1
Course work in progress	1	2	1	2	0	0	2	1
TOTAL	20	48	2	3	13	33	35	25
MASTER								
Completed	6	14	25	43	13	33	44	32
Lacking only thesis	5	12	5	9	0	0	10	7
Course work in progress	1	2	2	3	1	3	4	3
TOTAL	12	29	32	55	14	36	58	42
DOCTORATE								
Completed	7	17	15	26	18	46	40	29
Lacking only thesis	10	24	6	10	14	36	30	22
Course work in progress	1	2	2	3	3	8	6	4
TOTAL	18	43	23	40	35	90	76	55
OTHER								
One	5	12	5	9	6	15	16	12
Two	3	7	2	3	4	10	9	6
Three	1	2	1	2	0	0	2	1
TOTAL	9	21	8	14	10	26	27	19

noted: at University C those holding the Master's degree are more inclined to have it with thesis than those at University A. We conclude therefore, that among the French-Canadian universities there has been no standard hiring policy in terms of the background of the candidates for professorships. If one adds to this the differences of background noted at University B, a picture of great diversity at the three universities is presented.

In the case of University C, where 33 per cent report a Master's with thesis, as compared to only 14 per cent at University A, there is a much higher proportion of respondents also holding the doctorate, this being 46 per cent at University C but only 17 per cent at University A.

If one ignores the degree of completeness of work toward a doctorate there is no striking difference between Universities A and B in terms of holding or having some commitment to the doctor's degree; however, the doctorate is more than twice as common at University C as it is at the other two universities; 90 per cent of the respondents here are at some stage of doctoral studies, with almost half of them (46 per cent) actually having completed them.

There is considerable variation by university in the proportion of those having completed the thesis in comparison to those whose work towards a doctorate is still underway. For example, in University A, only seven of eighteen involved in doctoral studies have already completed their work; at University C, about half are in progress and half completed, whereas in University B almost three quarters of those committed to a doctorate have completed all the work, including thesis.

As can be seen from the data in Appendix II-1, the great majority of those who have completed or are involved in doctoral studies, have pursued their work outside the Province of Quebec.

By and large respondents at University B have their doctoral training in American universities whereas a somewhat larger proportion in A and in C, do their work in European universities.

Taking all three universities together, those respondents who have already demonstrated their research capacity by actually completing the doctoral degree constitute less than one in three. We hypothesize that this is a lower level than would be encountered in most other faculties of the universities.

The data bearing on our analysis of the relationship between having completed a doctorate with thesis and research productivity is presented in Table II-4 A, which shows no significant relationship. Since we feel certain that as a group, those with doctorates have better research training than those without, we are forced to suggest the possibility that the research capacities of members of faculties of education are not taken advantage of. We believe that this unexpected fact merits further study.

TABLE II-4 A

HAVING A DOCTORATE WITH THESIS RELATED TO RESEARCH PRODUCTIVITY

	RESEARCH ACTIVITY	
HAVING COMPLETED A DOCTORATE WITH THESIS	Having done or currently doing research	Ten hours or more per week on research
YES	74%	24%
	n.s.	n.s.
NO	65%	33%

Table II-5 presents the data concerning professional teacher training in the backgrounds of our respondents.

TABLE II-5

Q. 5 PROFESSIONAL TEACHER TRAINING other than reported in 4 above.

	UNIVERSITIES							
	A		B		C		TOTAL	
HAVING CERTIFICATE(S)	N	%	N	%	N	%	N	%
One	18	43	32	55	13	33	63	45
Two or more	7	17	16	28	8	21	31	22
TOTAL	25	60	48	83	21	54	94	22

There is considerable variation in the proportion of professors holding teaching certificates at the three universities. Whereas only 54 per cent and 60 per cent at Universities C and A respectively, hold teaching certificates, 83 per cent of respondents at University B do so. The relationship between the fact of holding a teacher certificate and research productivity is shown in Table II-5 A.

TABLE II-5 A

HAVING A TEACHER CERTIFICATE RELATED TO RESEARCH ACTIVITY

	RESEARCH ACTIVITY		
HAVING A TEACHER CERTIFICATE	Having done or currently doing research	Ten hours or more per week on research	Having plans for research in the next 2 years
YES	67%	30%	61%
	n.s.	n.s.	n.s.
NO	70%	32%	48%

Table II-5 A shows no significant relationship between certificate and research activities, past, present, or future.

Another possible background factor related to research productivity could be whether or not the respondent has had teaching experience, Table II-6 presents the data concerning teaching experience for the three universities.

TABLE II-6*

Q. 6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

	UNIVERSITIES							
	A		B		C		TOTAL	
TEACHING EXPERIENCE	N	%	N	%	N	%	N	%
Elementary	14	33	33	57	13	33	60	43
Secondary	23	55	46	79	22	56	91	65
CEGEP & Post-secondary	15	36	3	5	24	62	42	30
University & College	36	86	50	86	29	74	115	83

* The data of this Table are condensed from Appendix II-2.

More than half the professors at University B have had elementary school teaching experience and over three quarters of them have had secondary school teaching experience. This contrasts with professors at Universities A and C, about a third of whom have had elementary experience, and only about half of whom have had secondary school experience. However, whereas virtually none of the professors at B has had CEGEP and post-secondary experience, a third at University A and almost two thirds at University C, have.

As the figures in Table II-6 A show, respondents with teaching experience at either elementary and secondary levels are neither more nor less likely to be involved in research activities than respondents without such experience.

TABLE II-6 A

TEACHING EXPERIENCE AT THE ELEMENTARY OR SECONDARY LEVEL RELATED TO RESEARCH ACTIVITY

	RESEARCH ACTIVITY	
ELEMENTARY LEVEL	Research done in the past or currently	Actual time spent on research
with teaching experience	64%	28%
	n.s.	n.s.
without teaching experience	70%	32%
SECONDARY LEVEL		
with teaching experience	70%	31%
	n.s.	n.s.
without teaching experience	63%	29%

Another possible background factor which may help to differentiate the faculty members at the three universities is administrative experience, which is summarized in Table II-7.

TABLE II-7*

Q. 6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

	UNIVERSITIES							
	A		B		C		TOTAL	
ADMINISTRATIVE EXPERIENCE	N	%	N	%	N	%	N	%
Elementary	3	7	6	10	2	5	11	8
Secondary	4	10	4	7	10	26	18	13
CEGEP & Post-secondary	3	7	0	0	10	26	13	9
University & College	12	29	11	19	11	28	34	24

* The data on this table are condensed from Appendix II-3.

Among the respondents, administrative experience is far less common than teaching experience. In no university have more than

10 per cent of the faculty members had administrative experience at the elementary school level, and in only one have more than 10 per cent had administrative experience at the secondary level. Again we find a variation in administrative experience at the CEGEP and post-secondary level. No one at University B has had one year of experience, about 7 per cent at University A, and a total of 26 per cent at University C have such experience.

It seems obvious that an important background factor related to research productivity would be previous experience in research. The data in Table II-8 show that a majority of faculty of education respondents have no such experience, and of those who do, almost none have more than five years of experience. This table also summarizes information on industrial and professional experience.

TABLE II-8

Q. 6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

	UNIVERSITIES							
	A		B		C		TOTAL	
Experience in years	N	%	N	%	N	%	N	%
RESEARCH								
1	7	17	9	16	1	3	17	12
2	7	17	8	14	4	10	19	14
3 - 5	4	10	1	2	13	33	18	13
6 - 10	1	2	1	2	1	3	3	2
over 10	0	0	1	2	1	3	2	1
None	23	55	38	66	19	49	80	58
INDUSTRIAL & PROFESSIONAL								
1	3	7	1	2	1	3	5	4
2	1	2	1	2	0	0	2	1
3 - 5	3	7	4	7	3	8	10	7
6 - 10	0	0	2	3	1	3	3	2
over 10	2	5	1	2	2	5	5	4
None	33	79	49	84	32	82	114	82
Number of Respondents	42		58		39		139	

Only one third of the professors at University B have had experience in research, whereas about half of the other respondents have. Further, it is clear that those at University B have experience of a very recent nature, whereas at University A and particularly University C, the depth of research experience is greater.

On the whole, industrial and professional experience does not seem to be a major factor in the background of respondents to these questions at any of the universities.

In summary, teaching experience is very common at University B and occurs frequently at the other two; and research experience exists with about 40 per cent of the respondents overall. Otherwise, related professional experience outside the university milieu is not a major part of the background of the respondents. A comparison in this regard with other types of faculty groups would be interesting, especially with those faculties that lead to other professions such as engineering, medicine and law.

The characteristics of the members of any faculty will certainly be reflected in the policies in effect in that faculty with regard to the appointment of new faculty members. It appears reasonable to predict that where the professional preparation of teachers is the major role of the new faculty member, a professional graduate degree would be an appropriate qualification, but that in cases where research is to be an important activity, a research graduate degree (with thesis) would be a more useful preparation. The next two tables, Table II-9 and Table II-10 make comparisons among Universities A, B and C in this regard.

TABLE II-9

Q. 28 In making faculty appointments which kind of graduate degree is given preference generally in your faculty?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professional	8	19	9	16	4	10	21	15
Research	12	29	9	16	12	31	33	24
Neither	15	36	24	41	12	31	51	37
No response	7	17	16	28	11	28	34	24
Number of Respondents	42		58		39		139	

Thirty-seven per cent suggest that no preference is given in terms of professional or research graduate degrees in making the faculty appointments. However where the distinction is made, it is clear that the research degree is given preference in Universities A and C, while at University B the emphasis on research and on professional degrees is equal, being 16 per cent in each case. The distinction in favour of research degrees is sharper at University C than at University A.

TABLE II-10

Q. 29 What kind of graduate degree do you feel should be given preference? (In making faculty appointments)

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professional	4	10	8	14	4	10	16	12
Research	18	43	12	21	15	38	45	32
Neither	6	14	25	43	6	15	37	27
No response	14	33	13	22	14	36	41	29
Number of Respondents	42		58		39		139	

In response to the question about what kind of graduate degree should be given preference, professors at Universities A and C are much more likely to emphasize the research degree (about 40 per cent in each case) than professors at University B, where only about a fifth provide this emphasis.

Again, University B is much more likely than Universities A and C to suggest that neither should be given preference, this response accounting for more than 40 per cent of the faculty members in University B, and about a sixth in Universities A and C.

It is of interest to note that less than three quarters of our respondents ventured to express an opinion about these two questions (28 and 29).

In terms of research productivity, our prediction was that respondents who believe a preference for research degrees should be a criterion in hiring would be more productive in research. The per cent response rates presented in Table II-10 A support this hypothesis.

TABLE II-10 A

PREFERENCE FOR PROFESSIONAL OR RESEARCH DEGREES RELATED TO RESEARCH ACTIVITY

	RESEARCH ACTIVITY	
KINDS OF DEGREES GIVEN PREFERENCE IN FACULTY APPOINTMENTS	Research done in the past or currently	Actual time spent on research
Professional	54%	29%
Research	81%	22%
	$p < .05$*	n.s.
Neither	72%	34%
KINDS OF DEGREES THAT SHOULD BE GIVEN PREFERENCE IN FACULTY APPOINTMENTS		
Professional	44%	17%
Research	82%	39%
	$p < .02$	n.s.
Neither	72%	26%

* one-tailed test

Table II-10 A shows that 81 per cent of those who say that research degrees are given preference in faculty appointments, have done research in the past or are currently doing research, compared to only 54 per cent of those who express a preference for professional degrees. But 72 per cent of those who think neither kind of degree should be given preference, have done or are doing research.

It is interesting to note that there is very little difference in the "research done in the past or currently" column between those who feel that neither kind of degree is or should be given preference in hiring faculty and those who feel that research degrees are or should be given preference. The major difference in both cases is accounted for by those who favour the professional degree, and they are the least likely to have done research in the past, or to be pursuing research currently.

The actual time spent on research is not significantly related to the kinds of degrees that are or should be given preference.

To specify the attitudes of respondents about the desired backgrounds of new faculty appointees, questions were asked concerning actual subject areas. These answers are summarized in Table II-11 and detailed in Appendix II-4.

Table II-11 shows that in general, respondents favour markedly the hiring of candidates trained in a school of education (options 1 and 2), the exception being graduate courses on vocational education, where a preference for practitioners with a great deal of experience in the field is more common.

TABLE II-11

Q. 32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

	PREFERENCE BY UNIVERSITIES		
	UNIVERSITIES		
GRADUATE COURSE IN	A	B	C
EDUCATIONAL ADMINISTRATION	1, 5	1	5*
EDUCATIONAL SOCIOLOGY	2, 4	1, 2	2
GUIDANCE & COUNSELING	5, 2	1, 2	5, 2
PHILOSOPHY OF EDUCATION	1	1	1
HISTORY OF EDUCATION	1	1, 2	2
CHILD DEVELOPMENT	2	2	2
EDUCATIONAL PSYCHOLOGY	2	2	2
METHODS OF EDUCATIONAL RESEARCH	2	2	2
COMPARATIVE EDUCATION	2	2	2
SPECIAL EDUCATION	2, 5	2	5
LANGUAGE ARTS	2,3,1,4	1	1
SOCIAL STUDIES	4	1	1, 5
NATURAL SCIENCES & MATHEMATICS	2, 4	1	1
VOCATIONAL EDUCATION	5	1, 5	5

*** The first or only figure which appears in a column opposite to a given opening represents the preference of the majority of the respondents. When two or more figures are given, they represent an equal or nearly equal selection of particular kinds of candidates. Thus in the first now, at University B, a majority chose option 1, at University C, option 5, but at University A, options 1 and 5 equally.**

CODE

A professor trained in a school of education -
1. **who has mostly taught in the field.**
2. **who has mostly done research in the field.**

A professor trained outside a school of education -

3. **who has mostly taught in a related field.**
4. **who has mostly done research in a related field.**
5. **A school practitioner who has a great deal of experience in the field.**
6. **No particular preference.**

Professors at University A are likely to select a professor trained in a school of education. The emphasis is on someone who has done research rather than on someone who has mostly taught, in the field (twice more code 2 than code 1 responses). They are the only group who emphasize the training outside a school of education, for a few openings.

It is clear that respondents in University B are in favour almost exclusively of professors trained in schools of education; in nine cases, they express a preference for one who has mostly taught in the field and in the other five, one who has mostly done research in the field, but in every case a professor trained in a school of education.

Respondents at University C are not as universal in their preference for professors trained in a school of education; however, this is still the majority response for them.

There are striking differences between French-language and English-language universities in our sample in their attitude toward the source of personnel for Guidance and Counselling. Respondents at Universities A and C are equally likely to require one who has been a school practitioner with a great deal of experience in the field, or a professor trained in a school of education with research experience, whereas those at University B prefer someone trained in a school of education, with experience either of teaching or of research. For Vocational Education, respondents at University A and particularly at University C favour the selection of a school practitioner with experience rather than one trained in a school of education, whereas the reverse pattern is observed at University B. The same comparison may be made between Universities C and B, concerning Special Education.

In four areas in particular there is a tendency to require people who have had research experience. These are, in order of their rank, Methods of Educational Research, with nearly two thirds (64 per cent) of the respondents indicating a preference for people who have done research in the field (see Appendix II-4 for actual per cent responses); Comparative Education with 48 per cent overall; Child Development, with 47 per cent, and Educational Psychology, with 44 per cent.

Admissions policy

In addition to their attitudes about the desirable attributes of new faculty, we were interested in the opinions of the faculty of education respondents with regard to the backgrounds of candidates to graduate programs in education requiring a research thesis. This information is presented in Table II-12.

There are no striking differences of opinion among the respondents of the three universities concerning ideal admissions policies with the exception that at Universities B and C, a high grade point average in the undergraduate degree is more generally considered a desirable requirement at both Master's and Doctoral level than it is at University A. Further, while about one third of the faculty members at Universities B and C feel that letters of recommendation are important at both the Master's and Doctoral level, only about half this proportion give this response in University A.

TABLE II-12

Q. 40 With respect to admissions policy, which of the following requirements are likely to insure greater academic quality of students in graduate programs requiring a research thesis in Education?

REQUIREMENTS Level	UNIVERSITIES A N	A %	B N	B %	C N	C %	TOTAL N	TOTAL %
PROFESSIONAL TRAINING								
Master's	27	64	27	47	20	51	74	53
Doctoral	21	50	28	48	20	51	69	50
TEACHING EXPERIENCE								
Master's	23	55	27	47	20	51	70	50
Doctoral	19	45	22	38	19	49	60	43
HIGH GRADE POINT AVERAGE IN UNDERGRADUATE DEGREE								
Master's	7	17	35	60	20	51	62	45
Doctoral	8	19	32	55	16	41	56	40
GRADUATE RECORD EXAM OR SIMILAR TEST								
Master's	19	45	22	38	19	49	60	43
Doctoral	18	43	24	41	12	31	54	39
LETTERS OF RECOMMENDATION								
Master's	7	17	19	33	14	36	40	29
Doctoral	6	14	22	38	11	28	39	28
NO PARTICULAR REQUIREMENT OTHER THAN UNDERGRADUATE DEGREE								
Master's	9	21	8	14	2	5	19	14
Doctoral	4	10	3	5	2	5	9	6
OTHER								
Master's	7	17	5	9	4	10	16	12
Doctoral	12	29	5	9	3	8	20	14
Number of Respondents	42		58		39		139	

We were concerned with a possible relationship between faculty opinion on this subject of admissions requirements for students at the doctoral level, and their own research productivity because it seemed reasonable to expect that research-oriented faculty members might have a different picture of the "ideal student" than non-research oriented faculty members. But the data in Table II-12 A show that at least with regard to professional training, teaching experience, and high grade point average, there are no significant differences in preferences on the part of those who do research as compared with those who do not.

TABLE II-12 A

RESEARCH ACTIVITY RELATED TO PREFERRED ADMISSION REQUIREMENTS TO THE DOCTOR'S DEGREE WITH THESIS.

	ADMISSION REQUIREMENTS SHOULD INCLUDE					
RESEARCH ACTIVITY	Professional training		Teaching experience		High grade point average	
Have done or currently doing research						
YES	50%		47%		40%	
		n.s.		n.s.		n.s.
NO	51%		41%		41%	
Ten hours or more per week spent on research						
YES	48%		46%		28%	
		n.s.		n.s.		n.s.
NO	51%		44%		45%	

CURRENT ACTIVITIES

The research capacity of any professor is undoubtedly related to the extent of his various duties such as teaching, committee work, administration, and others. Comparisons of the activities of professors are made for Universities A, B and C in Table II-13. More detailed data appear in Appendix II-5.

TABLE II-13

Q. 7 What are the major job areas in your present appointment, and how many hours per week of your time are devoted to each?

ACTIVITIES	UNIVERSITIES			
Hours per week	A %	B %	C %	TOTAL %
PREPARATION FOR TEACHING				
None - 4	21	17	23	20
5 - 9	19	19	31	22
10+	60	64	46	58
TEACHING				
None - 4	40	7	54	30
5 - 9	48	36	44	42
10+	12	57	3	28
RESEARCH				
None - 4	40	65	41	51
5 - 9	14	21	20	19
10+	45	14	38	30
SUPERVISING STUDENTS				
None - 4	50	50	79	58
5 - 9	33	29	8	24
10+	17	21	13	17
ADMINISTRATION				
None - 4	60	69	74	68
5 - 9	7	9	5	7
10+	34	22	21	25
COMMITTEE WORK				
None - 4	62	69	72	68
5 - 9	17	24	10	18
10+	22	7	18	15
CONSULTATION SCHOOL SYSTEM				
None - 4	100	93	98	96
5 - 9	0	5	3	3
10+	0	2	0	1
CONSULTATION GOVERNMENT				
None - 4	100	97	97	98
5 - 9	0	3	0	1
10+	0	0	3	1
EXTENSION WORK				
None - 4	95	100	95	97
5 - 9	5	0	3	2
10+	0	0	3	1

Table II-13 deals with 9 separate categories of activities. These are discussed individually in sections below. Some of our remarks are based on Appendix II-5 as well as on the table.

Preparation for Teaching

There seem to be no marked differences in reported amounts of time per week spent in preparation for teaching.

Teaching

In the actual time spent in teaching, the differences by university is striking. More than half of the faculty respondents at University B spend more than 10 hours a week teaching, compared to 12 per cent at University A and only 3 per cent at University C. A further study of the same section of Table II-13 shows that teaching duties are heaviest at B, much less heavy at A, and that the university with the least onerous teaching duties is C. An examination of the table suggests that the amount of time spent in research is inversely related to that spent in teaching. Fully half of the faculty responding in University B do no research, whereas only about a third at C and about a quarter at A, are in this situation. Further, if more than 10 hours a week is indicative of a major commitment to research, then it is clear that such a situation is much more common at Universities A and C, than at University B. At Universities A and C, almost three times as many professors spend 10 hours or more a week on research than at University B.

Table II-13 A shows that the apparent inverse relationship between time spent on teaching and time spent on research is indeed significant. While only 20 per cent of those who spend more than ten hours per week on teaching also spend ten hours or more on research, 34 per cent of those who spend less than ten hours per week on teaching, devote more than ten hours per week on research.

TABLE II-13 A

TEACHING ACTIVITY RELATED TO RESEARCH ACTIVITY

	RESEARCH ACTIVITY	
TIME SPENT ON TEACHING	Having done or currently doing research	Ten hours or more per week on research
Less than ten hours	70%	34%
	n.s.	$p < .05$*
More than ten hours	61%	20%

* one-tailed test

Supervision of Students

Double the proportion of faculty responding at Universities A and C do no supervision of students by comparison to those at University B, where fewer than one in five is free from this duty (see Appendix II-5). Further, a striking difference can be noted in Universities A and B on one hand and University C on the other. At Universities A and B, half of the faculty members have less than five hours a week at this task, compared to 80 per cent at University C.

Administration

There are no striking differences among universities concerning time spent on administration. In general, it appears that most faculty members do a considerable amount of administration, or very little, if any at all.

Committee Work

Involvement in committee work to the extent of more than four hours per week is not general at any of the three universities. However, as the figures in Appendix II-5 show, complete or nearly complete freedom from committee work is more characteristic of Universities A and C than of University B.

Consultation

On the whole, consultation either with the school system or with the government does not play a major part in the weekly responsibilities of the faculty members of any of the three universities.

Extension Work

Extension work is not an important activity for most faculty members at these three universities.

Summarizing the above sections, we must reiterate what has already been observed and that is that the situation at University B is far less conducive to the conduct of research than at A and C. Duties other than research are in general, a larger part of the work-week of respondents at University B than elsewhere. With reference to Table II-13 the respondents at University A also devote more hours per week than others to their present appointment.

We summarize in Table II-14 the opinions of the professors concerning the appropriateness of the distribution of their time among various duties.

The level of satisfaction concerning the amount of time spent on preparation for teaching is about the same at the three universities, 27 per cent of the respondents finding that they devote too little time to it, and only half of them thinking that the amount of time is about right.

TABLE II-14

Q. 8 Possibly the amount of time that you spend on these activities is not ideal. Indicate how closely, in your view, your time allotment fits the ideal situation.

	UNIVERSITIES			
	A	B	C	TOTAL
	%	%	%	%*
PREPARATION FOR TEACHING				
Too much	10	7	5	7
About right	40	52	54	49
Too little	31	24	26	27
TEACHING				
Too much	21	29	3	19
About right	50	48	62	53
Too little	0	3	13	5
RESEARCH				
Too much	0	0	5	1
About right	17	7	21	14
Too little	43	47	49	46
SUPERVISING STUDENTS				
Too much	7	12	5	9
About right	38	41	33	38
Too little	0	10	5	6
ADMINISTRATION				
Too much	17	21	26	21
About right	19	19	18	19
Too little	0	3	0	1
COMMITTEE WORK				
Too much	19	17	21	19
About right	26	41	28	33
Too little	2	2	0	1
CONSULTATION SCHOOL SYSTEM				
Too much	0	2	0	1
About right	2	12	3	6
Too little	5	7	5	6
CONSULTATION GOVERNMENT				
Too much	2	2	0	1
About right	2	2	8	4
Too little	0	3	0	1
EXTENSION WORK				
Too much	0	2	0	1
About right	5	7	3	5
Too little	0	0	3	1

* Totals less than 100 per cent because some respondents did not reply.

The expressed evaluation of the time spent on teaching suggests an interesting comparison to Table II-13 where it was noted that the teaching load at University B is considerably larger than at the other two universities. On the one hand, about half of the respondents at University B, along with half of those at University A, feel that their teaching load is about right, and 62 per cent at University C hold that position; on the other hand, ten times as many respondents at University B than at University C find that their teaching load is too heavy; this agrees with the figures presented in Table II-13 which indicate that professors at University C do in fact have the lightest teaching load.

The amount of time that it would be appropriate to devote to research is judged differently in different universities. About half of our respondents, regardless of university, say that too little time is spent on research.

Fully one in five indicate that they spend too much time in administration and committee work. (In fact, this represents about half of those who do spend any time on administration, and less than a third of those who actually spend time on committee work, so that dissatisfaction is greater concerning administration than committee work).

TABLE II-15

Q. 9 Do you usually teach summer school at your university?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	33	79	25	43	18	46	76	55

There are differences about the proportion of staff teaching summer school at the universities. At University A, more than three quarters generally undertake this work, whereas at Universities B and C less than half do so.

Those who do not teach summer school indicate in an open-ended question that they engage in a variety of occupations, the most common of which is research, followed closely by preparation for teaching and teaching outside their own university. Study is a popular summer pastime, as is reading. Some respondents have administrative duties during the summer. Of the remainder, a few travel, some write, and some attend conferences.

TABLE II-16

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Q. 11 Does your appointment commit you to teaching summer school at your university?								
YES	8	19	2	3	1	3	11	8
Q. 12 If yes, do you receive additional salary for that work?								
YES	23	55	10	17	7	18	40	29

Table II-16 makes it clear that the majority of respondents who are teaching summer school are doing so voluntarily, since it is only at University A that any appreciable proportion (one in five) reply that they are required to teach summer school.

Regardless of university, the great majority, - from 88 to 96 per cent, - receive additional salary for teaching summer school.

Returning to Table II-13, we see that a higher proportion of respondents at University A are involved in research, and devote more hours per week to their appointment, and from Table II-15 we learn that a higher proportion teach summer school. Table II-16 indicates that more respondents at University A are committed to teaching summer school at the same university. There appears to be a picture emerging of the respondents at University A being much more devoted to their professional appointment both in hours per week, and weeks per year, and at the same time carrying a high commitment to research. This observation leads us to examine the relationship between research activities and the teaching of summer school. The figures appear in Table II-16 A.

TABLE II-16 A

SUMMER SCHOOL TEACHING RELATED TO RESEARCH ACTIVITY

	RESEARCH ACTIVITY	
TEACHING SUMMER SCHOOL	Having done or currently doing research	Ten hours or more per week on research
YES	70%	35%
	n.s.	n.s.
NO	64%	23%

Although it seems that those who teach summer school are more likely also to undertake research activities, the differences are not statistically significant. What does appear quite certain is that we can not make a case for summer school teaching interfering with the research activities of professors of education.

Responsibility for the Supervision of Student Research

Another policy possibly related to research activities on the part of faculty members is that concerning their responsibility for the supervision of student research. Table II-17 shows the proportions of respondents with different opinions as to the ideal extent of involvement.

TABLE II-17

Q. 38 What proportion of the Faculty of Education should, in your opinion, be involved in supervising student research?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
75 - 100%	6	14	20	34	17	44	43	31
66%	9	21	1	2	6	15	16	12
50%	10	24	7	12	9	23	26	19
33%	7	17	5	9	5	13	17	12
0 - 25%	8	19	24	41	0	0	32	23
TOTAL	40	95	57	98	37	95	134	96

Inspection of the data in this table suggests that the major difference in faculty opinion lies in University B where the responses tend to be either at one extreme or the other. At University A, the distribution is almost even, with similar proportions of respondents agreeing to any proposed per cent of involvement. At University C, around 60 per cent of the respondents say that more than two thirds of the faculty should be involved. This reveals that the faculty are more homogeneous in their opinion at C concerning the involvement in supervising the research of students, than at Universities A or B.

In response to question 38, almost a third of the respondents qualified their answers in some way. The most frequently made statements were related to the qualifications of the professors, and most of them imply that while all teacher-trainers should be competent to direct research, only those who actually are adequately qualified should be permitted to do so. Other comments drew attention to the importance of the interests and aptitudes of professors. One respondent pointed out that a blanket rule requiring all faculty to direct research could easily do more harm than good. Another respondent stated that every professor should be given the opportunity to direct research, implying that there was high status attached to this activity; however, some pointed out that this would depend on an adequate ratio of graduate to undergraduate students.

It seems reasonable to assume that those who are or have been involved in research activities would feel that higher proportions of the members of faculties of education should be involved in the supervision of research. However, while the per cents in Table II-17 A are in the direction we had predicted, the differences are not statistically significant.

TABLE II-17 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING INVOLVEMENT OF FACULTY MEMBERS IN THE SUPERVISION OF STUDENT RESEARCH

RESEARCH ACTIVITY		PROPORTION OF FACULTY WHICH SHOULD BE INVOLVED IN SUPERVISING STUDENT RESEARCH			
		50% or more		Less than 50%	
Having done or currently doing research					
	YES	63%	n.s.	37%	n.s.
	NO	57%		43%	
Ten hours or more per week on research					
	YES	70%	n.s.	30%	n.s.
	NO	58%		42%	

ATTITUDES RELATED TO RESEARCH

TABLE II-18

Q. 27 Are you in favour, for your university, of a system of degrees in education which reflects the distinction between the two types of training defined above?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	33	79	37	64	27	69	97	70

The distinction referred to in the heading for Table II-18 was presented in the questionnaire as follows:

> "There is controversy as to the relative merits of (a) a graduate degree devoted to promoting professional competence in a specialized area such as administration, guidance, or teaching methods, and not requiring original research resulting in a thesis; and (b) a graduate degree in which original research is a requirement, and training is given which leads to the production of original research and a thesis. For purposes of this study we shall refer to (a) as a professional degree, and (b) as a research degree."

The data in this table indicate that regardless of university, a majority of faculty members are in favour of a system of degrees which reflects a distinction between professional and research training at the graduate level.

Respondents had an opportunity to comment on this issue and 76 (from all six universities) wrote comments. Forty respondents were in favour of the distinction, a majority stating that it provided different possibilities for different aptitudes and interests; 12 mentioned that they were in favour of the distinction only under certain conditions; details of these replies appear in Appendix II-6. Seventeen respondents declared they were against the distinction, most of them insisting that all degrees should require research, and three were in favour of a system of two degrees at the Master's level and only a research degree at the doctoral level.

We expected that respondents actively engaged in research would be more favourably disposed to making a distinction between research and professional graduate degrees; but again, as a study of Table II-18 A shows, the trends were as we had predicted, but did not reach a level of statistical significance.

TABLE II-18 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING THE DISTINCTION BETWEEN PROFESSIONAL DEGREES AND RESEARCH DEGREES

RESEARCH ACTIVITY		IN FAVOUR OF A SYSTEM OF DEGREES MAKING A DISTINCTION	
Having done or currently doing research			
	YES	75%	n.s.
	NO	55%	
Ten hours or more per week on research			
	YES	76%	n.s.
	NO	65%	

Another reflection of the respondents' own attitudes to research would be their opinion as to the adequacy of the number of graduate students planning research careers in education. The data relevant of this attitude appear in Table II-19.

The differences between responses at Universities A, B and C are relatively small. A majority at each university feel that the number is either insufficient or seriously insufficient; there is consensus that not enough graduate students in education are planning careers in educational research.

TABLE II-19

Q. 43 In your opinion is the number of graduate students in Education planning careers in educational research:

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
seriously insufficient	10	24	10	17	12	31	32	23
insufficient	25	60	25	43	20	51	70	50
sufficient	0	0	7	12	3	8	10	7
excessive	1	2	1	2	0	0	2	1
TOTAL	36	86	43	74	35	90	114	82

Among the reasons given by the respondents for insufficient interest in careers in educational research were the following: students are not interested in research; there is a lack of opportunities to do research; there is a lack of a research tradition in education; encouragement from officials is not forthcoming; universities are preoccupied with teacher training; and promising scholars are attracted to other well-paying jobs.

The response to question 43 is influenced by the commitment of the respondent to research. As shown in Table II-19 A, those who spend ten hours or more per week on research activities are much more likely (39 per cent) to believe that the number of students in education planning a career in educational research is seriously insufficient than those who spend less than ten hours per week on research (19 per cent).

TABLE II-19 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING THE NUMBER OF STUDENTS IN EDUCATION PLANNING CAREERS IN EDUCATIONAL RESEARCH

RESEARCH ACTIVITY	OF OPINION THAT THE NUMBER OF STUDENTS IN EDUCATION PLANNING A CAREER IN EDUC. RESEARCH IS SERIOUSLY INSUFFICIENT	
Having done or currently doing research		
YES	28%	n.s.
NO	18%	
Ten hours or more per week on research		
YES	39%	$p < .01$
NO	19%	

Faculty members were asked to comment on the importance given to research in their faculty.

TABLE II-20

Q. 33 How would you compare the relative importance given to research in your faculty as compared to your university as a whole?

	UNIVERSITIES						TOTAL	
	A		B		C			
	N	%	N	%	N	%	N	%
Greater or same	10	24	5	9	8	21	23	17
Less	22	52	39	67	15	38	76	55
I have no idea	10	24	14	24	16	41	40	29
Number of Respondents	42		58		39		139	

Faculty members at University B were significantly more likely to feel that the importance given to research at their faculty compared to their university as a whole was less than those at Universities A and C ($X^2 = 5.6$, $p < .05$). Further, respondents at University C were more likely than the others to reply "I have no idea".

Respondents were asked to compare their own opinions concerning the ideal balance between teaching and research with those of their colleagues, and with the policy of their own institution. Table II-21 shows these comparisons.

TABLE II-21

Q. 16 Which of the following best represents 1) your personal opinion, 2) the policy of your institution, and 3) the attitude of your colleagues in general?

	NUMBER RESPONDING											
	PERSONAL OPINION				INSTITUTION POLICY				COLLEAGUES ATTITUDE			
	A	B	C	T	A	B	C	T	A	B	C	T
	%	%	%	%	%	%	%	%	%	%	%	%
a)	10	21	13	15	14	40	33	30	12	17	15	15
b)	33	66	51	52	33	31	56	39	26	33	49	35
c)	5	3	13	6	2	0	3	1	5	7	15	9
d)	57	34	59	48	17	7	18	13	21	7	28	17
e)	14	0	13	8	2	0	5	2	0	2	3	1

N.B. Totals exceed 100 per cent because some individuals checked more than one answer.

a) Teaching should come first. Research must not interfere with the teaching process.
b) Teaching should be combined with some research activities.
c) Either should be done full time: there should not be any chance for conflict between the two.
d) The researcher should do some teaching so that students will have the benefit of contact with the researcher.
e) Other

Items b and d in Table II-21 indicate that the respondents generally feel that faculty members should not be engaged in either Teaching or Research exclusively but that rather they should do some of both.

However, when personal opinion is compared to perceived institutional policy, a widespread difference is noted. Although 15 per cent of the respondents believe that teaching should come first, double that proportion perceive that institutional policy stipulates that teaching should come first. An even larger contrast is noted with regard to item d) which indicates that while 48 per cent of respondents feel that researchers should do some teaching, only 13 per cent perceive this to be institutional policy.

In terms of perceived colleague attitude, respondents are more likely to feel that their colleagues concur with their beliefs rather than with institutional policy. The exceptions are the response pattern to items b) and d) which shows perceived colleagues attitudes more concordant with perceived institutional policy than with personal opinion.

All in all, Table II-21 suggests that faculty of education respondents are more favorable to research than they perceive the policies of their institutions to be.

To obtain another check on the attitudes of respondents to research and teaching we asked them if in their opinion all faculty members should be required to do some teaching or some research. Their response patterns are summarized in Table II-22.

TABLE II-22

Q. 17 & 18 In your opinion should all faculty members be required to do at least some teaching? some research?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
SOME TEACHING	27	64	41	71	32	82	100	72
SOME RESEARCH	29	69	15	26	32	82	76	55
Number of Respondents	42		58		39		139	

Although there are some variations in proportions, a majority of respondents in all three universities believe that all faculty members should be required to do at least some teaching.

In regard to the research requirement, however, University B is markedly different, from the other two universities, about three quarters rejecting the obligation to do research ($X^2 = 8.6, p < .01$). By contrast, fewer than a third at University A and fewer than a fifth at University C claim that faculty members should not all be required to do at least some research. As we have noted repeatedly with other similar findings, this difference at University B may well be related to the weight of the teacher-preparation assignment at that university.

Since the attitude toward a universal requirement for research was different at University B compared to Universities A and C, we analyzed the relationship between this attitude and research activity, as shown in Table II-22 A.

TABLE II-22 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING COMMITMENT OF FACULTY MEMBERS TO RESEARCH

RESEARCH ACTIVITY		OF OPINION THAT ALL FACULTY MEMBERS SHOULD BE REQUIRED TO DO AT LEAST SOME RESEARCH	
Having done or currently doing research			
	YES	60%	n.s.
	NO	47%	
Ten hours or more per week on research			
	YES	63%	n.s.
	NO	53%	

While it appears that faculty members involved in research are more likely than those not involved in research to feel that all other faculty members should be required to do at least some research the differences are not statistically significant.

Faculty members were invited to express their opinions as to the degree of involvement in educational research that would be appropriate to various educational personnel, both in public schools and universities. Their response patterns appear in Table II-23.

Comparing universities to each other, there are few differences in opinion as to the extent of involvement of persons of certain categories in conception and conduct of research. On the whole teachers and school administrators are expected to have only a moderate responsibility and involvement. Respondents believe that professors involved in teacher training should have a heavy involvement (especially at Universities A and C), and that professional educational researchers and behavioral scientists should have a very heavy involvement. This is the modal response in all universities.

There do appear to be some important differences in response by university. For example, while about a third of the respondents in University A feel that class teachers should have a heavy involvement in the conception and conduct of research, this is not true in Universities B and C. Further, respondents at University B are less likely than those at Universities A and C to believe that professors involved in teacher education should have a heavy or very heavy involvement in educational research.

TABLE II-23

Q. 58 There is controversy as to who is responsible for the actual conception as well as for the conduct of research in education. Some educators feel that every classroom teacher should conduct research, whereas others feel that only those with sophisticated training in research at the graduate level should conduct research. Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?

PERSONNEL	UNIVERSITIES							
	A		B		C		TOTAL	
Commitment	N	%	N	%	N	%	N	%
CLASS TEACHERS								
Very heavy	3	7	1	2	6	15	10	7
Heavy	13	31	2	3	8	21	23	17
Moderate	14	33	36	62	19	49	69	50
None	4	10	2	3	3	8	9	6
No response	8	19	17	29	3	8	28	20
SCHOOL ADMINISTRATORS								
Very heavy	0	0	2	3	2	5	4	3
Heavy	8	19	4	7	7	18	19	14
Moderate	20	48	31	53	17	44	68	49
None	2	5	3	5	3	8	8	6
No response	12	29	18	31	10	26	40	29
PROFESSORS INVOLVED IN TEACHER EDUCATION								
Very heavy	16	38	7	12	15	39	38	27
Heavy	21	50	21	36	18	46	60	43
Moderate	3	7	13	22	2	5	18	13
None	0	0	1	2	1	3	2	1
No response	2	5	16	28	3	8	21	15
PROFESSIONAL EDUCATIONAL RESEARCHERS IN FACULTIES OF EDUCATION								
Very heavy	35	83	27	47	29	74	91	65
Heavy	3	7	11	19	6	15	20	14
Moderate	0	0	4	7	0	0	4	3
None	0	0	0	0	0	0	0	0
No response	4	10	16	28	4	10	24	17
BEHAVIORAL SCIENTISTS IN FACULTIES OF EDUCATION								
Very heavy	29	69	18	31	19	49	66	47
Heavy	8	19	15	26	9	23	32	23
Moderate	1	2	7	12	4	10	12	9
None	0	0	0	0	0	0	0	0
No response	4	10	18	31	7	18	29	21
BEHAVIORAL SCIENTISTS IN OTHER FACULTIES								
Very heavy	16	38	13	22	12	31	41	29
Heavy	15	36	12	21	11	28	38	27
Moderate	3	7	12	21	5	13	20	14
None	0	0	1	2	1	3	2	1
No response	8	19	20	34	10	26	38	27
Number of Respondents	42		58		39		139	

Since it was assumed that those who actually do research would favour involvement in research on the part of the school teacher, we examined the relationship between the attitude towards the involvement of class teachers in research and research activities. The figures concerning this analysis appear in Table II-23 A.

TABLE II-23 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING THE INVOLVEMENT OF CLASS TEACHERS IN THE CONCEPTION AND CONDUCT OF RESEARCH

RESEARCH ACTIVITY		OF OPINION THAT THE INVOLVEMENT OF CLASS TEACHERS IN THE CONCEPTION AND CONDUCT OF EDUCATIONAL RESEARCH SHOULD BE		
Having done or currently doing research		Heavy or very heavy	None or moderate	
	YES	25%	75%	n.s.
	NO	20%	80%	
Ten hours or more per week on research				
	YES	35%	65%	$p < .02$
	NO	19%	81%	

Table II-23 A shows that those who spend ten hours or more per week on research are significantly more likely than those who do not to be of the opinion that classroom teachers should be involved in the conception as well as the conduct of educational research. It seems to us that if educational practitioners are to take the results of research seriously, then the proportion of research-oriented members of faculties of education will have an important bearing on this, for two reasons: first, in their contacts with student teachers, they are more likely to try to instill a respect for educational procedures based on research findings, and second, in their own research activities,

they may be more likely to involve practising teachers at intellectually meaningful levels of research collaboration.

It seems reasonable to assume that having a teaching certificate might predispose one favourably to the involvement of others so certified in the conception and conduct of research. This is analyzed as presented in Table II-23 B.

TABLE II-23 B

HAVING A TEACHING CERTIFICATE RELATED TO OPINION CONCERNING THE INVOLVEMENT OF CLASS TEACHERS IN THE CONCEPTION AND THE CONDUCT OF EDUCATIONAL RESEARCH

HAVING A TEACHER CERTIFICATE	OF OPINION THAT CLASS ROOM TEACHERS SHOULD BE INVOLVED TO SOME EXTENT IN THE CONCEPTION AND CONDUCT OF EDUCATIONAL RESEARCH	
YES	76%	n.s.
NO	68%	

Although those with certificates seem somewhat more favourably inclined (76 per cent) to the involvement of classroom teachers in research than those without (68 per cent) the differences are not statistically significant.

FACTORS RELATED TO THE UNDERTAKING OF RESEARCH

It is obvious that the attitudes of the faculty members toward research should be related to whether or not they pursue research activities, and we have already dealt with this idea in this chapter. Another set of factors related to research activities could be the policies of the faculty and other organizations. For example, we postulate that if the faculty confers certain advantages, such as lighter teaching loads, extra pay, promotions, and the like to researchers, research productivity should be higher. Factors such as these are examined in Table II-24 in terms of advantages for the respondent himself and of perceived advantages for his colleagues.

TABLE II-24

Q. 14 As a result of doing research, is it your impression that you have gained in any of the following areas*, and do you feel that any of your colleagues have achieved such advantages as a result of doing research?

ADVANTAGES	UNIVERSITIES							
	A		B		C		TOTAL	
Recipients	N	%	N	%	N	%	N	%
a) TEACHING LOAD								
Yourself	11	26	3	5	12	31	26	19
Colleagues	12	29	14	24	13	33	39	28
b) EXEMPTIONS								
Yourself	4	10	2	3	7	18	13	9
Colleagues	6	14	8	14	8	21	22	16
c) EXTRA PAY								
Yourself	2	5	2	3	0	0	4	3
Colleagues	7	17	5	9	5	13	17	12
d) PROMOTIONS								
Yourself	1	2	4	7	8	21	13	9
Colleagues	8	19	9	16	14	36	31	22
e) PRESTIGE								
Yourself	13	31	15	26	16	41	44	32
Colleagues	18	43	20	34	17	44	55	40
f) INFLUENCE								
Yourself	10	24	11	19	10	26	31	22
Colleagues	13	31	12	21	11	28	36	26
g) SUPPORT								
Yourself	10	24	9	16	9	23	28	20
Colleagues	14	33	13	22	10	26	37	27
h) TRAVEL								
Yourself	18	43	14	24	13	33	45	32
Colleagues	18	43	24	41	12	31	54	39
i) FREEDOM								
Yourself	20	48	4	7	14	36	38	27
Colleagues	17	40	11	19	9	23	37	27
j) OTHER								
Yourself	2	5	2	3	3	8	7	6
Colleagues	1	2	1	2	3	8	5	3

---

*
a) Smaller teaching load during the academic year
b) Exemptions from committees, practice teaching supervision, administrative or similar duties
c) Extra pay for research during summer
d) Faster promotions
e) More prestige within the department
f) A greater voice in departmental decision-making
g) Greater financial support
h) Assistance in attending professional conferences
i) Greater freedom in defining your job assignments
j) Others

In terms of advantages obtained by the faculty member for himself by doing research, there are four outstanding items: the first two are that researchers appear to receive more prestige within their departments and financial assistance in attending professional conferences; in addition, there is greater freedom in defining job assignments for a quarter of the respondents and smaller teaching loads during the academic year in the case of about a fifth.

Between universities, there are some marked differences. In almost every case at University B fewer respondents indicate advantages to be gained by doing research than in the other universities. For example, 26 per cent in University A and 21 per cent in University C are allowed smaller teaching loads during the academic year for research; only 5 per cent do so at University B. Another example is the freedom obtained in defining job assignments. Where, in University A 48 per cent, and in University C 36 per cent, obtain greater freedom, only 7 per cent at University B feel that research leads to greater freedom in defining job assignments.

The perception by respondents of the rewards to colleagues for their educational research activities follow much the same pattern as for themselves. The predominant items are "More prestige within the department", and "Greater freedom in defining job assignments". The striking feature in this table, however, is that in every case, respondents feel that their colleagues obtain greater benefits from doing research than they themselves achieve. This is true at every university and the basic pattern of less benefit for research at University B persists.

It should be emphasized that these are the perceptions of the respondents and not the results of objective studies of the actual job situation; however, the consistency throughout the many tables leads us to believe that their perceptions are valid. In any case,

Sabbatical Requirements

One way of getting research done is to use a sabbatical leave for the purpose. Table II-27 deals with the respondents' perceptions of the requirements for obtaining sabbatical leaves in their faculties.

TABLE II-27

Q. 19 What are the requirements for obtaining a sabbatical year in your institution?

	UNIVERSITIES						TOTAL	
	A		B		C			
	N	%	N	%	N	%	N	%
I DON'T KNOW	22	52	31	53	30	77	83	60
NO. OF YEARS OF SERVICE REQUIRED								
No response	29	69	41	71	34	87	104	75
4	0	0	0	0	1	3	1	1
5	2	5	13	22	0	0	15	11
7	9	21	3	5	2	5	14	10
Service required but no. of years not specified	2	5	1	2	2	5	5	4
OTHER REQUIREMENTS	13	31	15	26	6	15	34	24

Responses to the question about sabbaticals show that over half in Universities A and B, and more than three quarters in University C, do not know what are the requirements for a sabbatical year at their university. What this probably means is that they are not aware of any particular requirement for a sabbatical year or may in fact feel that there is no such thing as a statutory sabbatical leave policy for their university; it is also likely that many requirements other than service in terms of years may play a part in determining leave; in fact, 24 per cent mention that there are requirements other than years of service. For those who do reply in terms of years about requirements for sabbatical, the modal response for University B is five years, as compared to seven years for Universities A and C.

The very small numbers responding and the variation of answers from those who do answer, suggest that faculty members are not well informed at these three universities concerning sabbatical leave, or that sabbatical leave policies have not been clearly formulated by the university.

Table II-28 deals with past and present eligibility for sabbatical leaves.

TABLE II-28

Q. 20 Are you or have you been eligible for sabbatical leave?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	12	29	17	29	4	10	33	24
NO	27	64	30	52	32	82	89	64
TOTAL	39	93	47	81	36	92	122	87

Comparison of the three universities suggest that there is considerable variation in perceived eligibility for sabbatical leave, particularly between Universities A and B on the one hand, and University C on the other. About a third in A and B perceive themselves as being or having been eligible for sabbatical leave whereas only one in ten at University C find themselves in this position.

The next table, Table II-29, deals with data relating to whether or not respondents have ever applied for a sabbatical year.

The most interesting finding in this table is that fewer than half replied to this particular question at each university. On the whole, we can take for granted that those who did not reply to the question have never applied for a sabbatical year; and if we interpret the data from this point of view, we must conclude then that fewer than 10 per cent of the respondents as a group have ever applied for a sabbatical year.

TABLE II-29

Q. 21 Have you ever applied for a sabbatical year?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	2	5	7	12	4	10	13	9
NO	18	43	20	34	10	26	48	35
TOTAL	20	48	27	47	14	36	61	44

Included in the questionnaire was the following item:

> "Q. 24 If you took a sabbatical year, what main purpose did it serve?"

Of those who specified their activities during sabbaticals, a majority indicated that they were pursuing doctoral studies. Other activities included research and participation in a foreign aid program.

One other possibility of accomplishing research is simply to obtain a leave of absence without pay for the purpose. Table II-30 deals with this question.

TABLE II-30

Q. 25 Have you ever been granted a leave of absence without pay to do research?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	1	2	4	7	1	3	6	4
NO	39	93	52	90	37	95	128	92
TOTAL	40	95	56	97	38	98	134	96

Overall, only about 4 per cent have ever been granted a leave of absence without pay to do research from any of the three universities.

The Role of Administrators in Faculty Research

In Chapter I, we dealt with the views of the deans as to the role they felt they should play in relation to faculty research and also with the deans' perceptions of their faculties views in this regard. Table II-31 presents opinions of the faculty members themselves regarding what role administrators are playing, and what role would be appropriate for them, in relation to the research of faculty members.

TABLE II-31

Q. 34 Which of the following statements best expresses your own view of the appropriate role for administrators regarding faculty research; and which best describes the present role of the administrators of the faculty or department of Education.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
ADMINISTRATORS FACILITATE, ACTIVELY ENCOURAGE, AND DIRECT FACULTY RESEARCH PROGRAMS								
Appropriate Role	5	12	9	16	8	21	22	16
Present Role	3	7	4	7	8	21	15	11
ADMINISTRATORS FACILITATE AND ACTIVELY ENCOURAGE FACULTY RESEARCH, BUT DO NOT NECESSARILY DIRECT RESEARCH PROGRAMS								
Appropriate Role	34	81	41	71	25	64	100	72
Present Role	22	52	13	22	13	33	48	35
ADMINISTRATORS ONLY FACILITATE FACULTY RESEARCH								
Appropriate Role	8	19	13	22	12	31	33	24
Present Role	12	29	13	22	11	28	36	26
ADMINISTRATORS LEAVE RESEARCH ENTIRELY TO THE RESEARCHERS								
Appropriate Role	6	14	6	10	6	15	18	13
Present Role	19	45	22	38	14	36	55	40
Number of Respondents	42		58		39		139	

N.B. Despite the wording of the question, many respondents indicated more than one role, present or appropriate. The data obtained nevertheless permit to appreciate the situation as perceived by the respondents.

In regard to the appropriate role and the present role of administrators, vis-à-vis research in the faculty or department of education, there appear to be small unimportant differences between the universities. However, the large differences appear between the appropriate role and the present role, for the second and the fourth items in the table. Most respondents (72 per cent) feel that administrators should facilitate and actively encourage faculty research but not necessarily direct research programmes. In fact, a much smaller proportion observe that this is in fact the role that administrators play; the situation is most favourable in this regard at University A. In contrast, only 13 per cent feel that administrators should leave research entirely to the researchers, and yet over 40 per cent feel that they are actually doing so.

These facts appear to indicate that respondents feel that administrators are not taking as much interest in research as they should be. This is consistent with other findings reported in Chapter I of this study, namely that deans and faculty members are in agreement as to the appropriate role of administrators, but not as to the actual role played by the deans.

Factors Influencing the Choice of Research Problems

The responses of faculty members to the question dealt with in Table II-2 (p. 61) indicate their belief that certain research problems are more important than others. Therefore, it is important to understand what factors influence faculty members in the choice of research problems. Table II-32 deals with this matter.

In terms of the factors which have influenced respondents in their choice of research problems, there are three that stand out: the first is "Training and ability" (68 per cent), the second is "Problems related to content field that the respondent is teaching" (53 per cent), the third is "Current Educational Problems" (41 per cent). This reliance on training and ability as a source of research problems is particularly strong at Universities C and A, although a majority in all universities cite it. This suggests that the faculty recruitment policies would have an important effect on what research gets done in future years.

TABLE II-32

Q. 56 Have the following factors tended to influence your choice of research problems to date?

	UNIVERSITIES							
	A		B		C		TOTAL	
FACTORS	N	%	N	%	N	%	N	%
PAST EXPERIENCE*	8	19	14	24	14	36	36	26
TRAINING AND ABILITY	31	74	29	50	34	87	94	68
PREOCCUPATIONS OF YOUR FACULTY	5	12	14	24	11	28	30	22
AVAILABILITY OF FUNDS	2	5	13	22	5	13	20	14
CURRENT EDUCATIONAL PROBLEMS	17	40	22	38	18	46	57	41
CONTENT FIELD YOU ARE TEACHING	24	57	25	43	24	62	73	53
FACULTY-STUDENT RELATIONS	13	31	6	10	13	33	32	23
Number of Respondents	42		58		39		139	

* Not related to profession or training

An interesting datum in Table II-32 is that so few of the respondents - ranging from 5 per cent at A through 13 per cent at C, to 22 per cent at B - cite the availability of funds as an influence on their choice of research problems to date. This is particularly interesting in the light of the larger proportion of respondents (34 per cent; see Table II-36) who indicate that there are financial needs for research activities which are not supported by grants. One reason for this response pattern may well be that sources of financial support for educational research in the past have been unrestricted as to topic, and very scarce. To determine the likely influence of a change in this situation we asked:

> "If the Institute for Research in Education published periodically a priority list of areas of educational

> activity in which provoncial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?"

The responses are summarized in Table II-33.

TABLE II-33

Q. 57 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

	UNIVERSITIES							
	A		B		C		TOTAL	
RESPONSE	N	%	N	%	N	%	N	%
YES	21	50	23	40	25	64	69	50
NO	16	38	16	28	12	31	44	32
TOTAL	37	88	39	68	37	95	113	82

Table II-33 shows, by contrast to Table II-32, that a majority of respondents at each university agree that a priority list, as well as the possibility of receiving financial support, would influence their choice of research topics.

This suggests that the Institute of Research in Education has a major role to play if it wishes to take advantage of this situation, both in suggesting areas of research and in financing. To provide a further check on this, we cross-tabulated the response pattern to this question with research activities of the respondents, and the results are presented in Table II-33 A.

These data presented in Table II-33 A support our interpretation of Table II-33, since it was those who were involved in research activities who were most likely to agree that they would be influenced by a priority list which might provide a key to the obtaining of financial assistance.

TABLE II-33 A

RESEARCH ACTIVITY RELATED TO INFLUENCE OF A PRIORITY LIST PUBLISHED BY THE I.R.E. ON THE CHOICE OF RESEARCH TOPICS

RESEARCH ACTIVITY	INFLUENCE OF PRIORITY LIST ON CHOICE OF RESEARCH TOPICS	
Having done or currently doing research		
YES	60%	$p < .01$
NO, NO RESPONSE	35%	
Ten hours or more per week on research		
YES	59%	n.s.
NO, NO RESPONSE	49%	

The question about a priority list provided space for uncoded comments. Of those who replied negatively, some explained their answers. Their comments fall into two distinct categories. The first is the type of comment which indicates a fixed and unchangeable interest on the part of the respondent, often accompanied by the expectation that this interest will not rank high in the I.R.E. priority list. One respondent suggested that if I.R.E. became aware of problems they should not merely publish lists, but should rather establish research teams, preferably at universities, and get on with the solution of those problems. The second category of response dealt with the idea of provincialism in outlook. There were statements referring to the international nature of research implying that mere duplication of work done elsewhere would result from a list focusing on the needs of Quebec.

Of those others who replied affirmatively and commented, more than half said that they would welcome a list if the topics were in their own field. One referred to the National Research Council priority list as a precedent; and others felt that the information would be useful.

Following the query about a priority list, we asked for information concerning the sources of grants in the two previous years. Table II-34 presents this information.

TABLE II-34

Q. 59 Could you inform us on the sources and amounts of your research funds for the last two academic years for work done (a) in this province; (b) elsewhere.

Year Location	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
TOTAL RESPONDENTS RECEIVING GRANTS								
1967-68								
In the Province	3	7	3	5	2	5	8	6
Elsewhere	4	10	0	0	1	3	5	4
1968-69								
In the Province	4	10	6	10	5	13	15	11
Elsewhere	3	7	0	0	3	8	6	4
TOTAL GRANTS HELD								
1967-68								
In the Province	6	14	5	9	2	5	13	9
Elsewhere	5	12	0	0	1	3	6	4
1968-69								
In the Province	6	14	11	19	5	13	22	16
Elsewhere	3	7	0	0	4	10	7	5
Number of Respondents	42		58		39		139	

The first section of Table II-34 (Total Respondents Receiving Grants) shows that a very small but increasing proportion of the respondents have received funds in the last two academic years for educational research done in this province. There are no great differences among the three universities in terms of the number of respondents receiving grants in Quebec; but in terms of funds received for work done elsewhere, it appears that more respondents in Universities A and C than in B fit into this category.

The second section of Table II-34 (Total Grants Held) shows the number of grants held rather than the number of respondents receiving grants, and since the percentages are higher in this section it suggests that some researchers hold more than one grant. This appears to be particularly true at University A in 1967-1968 and at Universities A and B in 1968-1969.

The responses to the question about the sources of grants gave very specific information as to the actual donor of the funds. This information is summarized in Table II-35.

TABLE II-35

Sources of Research Funds

ORGANIZATION	FREQUENCY
Institute of Research in Education	21
Quebec Universities	14
Quebec Government	5
Fédération des Commissions scolaires catholiques	3
Superior Council of Education (Quebec)	3
U.S. universities	3
Government of Canada	3
Corporation des enseignants du Québec	2
Personal Funds	2
Canada Council	1
Royal Society of Canada	1
Canadian Education Association	1
Commission des écoles catholiques de Montréal	1
Unesco	1
U.S. Office of Education	1
Pharmaceutical Industry	1
Expo 67	1
Ontario Institute for Studies in Education	1
"Ecole primaire"	1

The list shows that clearly the most important sources of research money are, first of all, the Institute of Research in Education, (21 grants), the Quebec universities, with 14 grants, and the Quebec

Government, with 5. Following this, there is a big drop with four sources tied for fourth at three grants each. These are the *Fédération des commissions scolaires catholiques*, the Superior Council of Education, universities in the United States, and the Government of Canada. Eleven other agencies are responsible for the other 12 grants that are reported.

At least one important reason for offering research grants is to provide an incentive to do more research. To see whether or not such grants in the past are associated with the intention to pursue research in the future, we cross-tabulated the data about the receipt of grants with whether or not the respondents actually had plans for research in the next two years. This analysis appears in Table II-35 A.

TABLE II-35 A

HAVING RECEIVED RESEARCH GRANTS IN THE PAST RELATED TO HAVING PLANS FOR RESEARCH IN THE NEXT TWO YEARS

HAVING RECEIVED GRANTS	HAVING PLANS FOR RESEARCH IN NEXT TWO YEARS	
YES	76%	$p < .05$
NO	53%	

The figures in Table II-35 A show that of those who have held grants, 76 per cent have plans for research in the next two years, whereas this is true for only 53 per cent of those who have not held grants. This difference is statistically significant at the .05 level. The receipt of research grants does appear to be related to plans for further research.

Financial Needs for Research Activities

We have already noted that a small but increasing number of respondents have received research grants in the past. This suggests that there are financial needs which are not being met by grants. We asked respondents about these needs, and their responses are noted in Table II-36.

TABLE II-36

Q. 61 Are there financial needs in your research activities which are not being supported by grants?

	UNIVERSITIES							
	A		B		C		TOTAL	
RESPONSE	N	%	N	%	N	%	N	%
YES	15	36	15	26	17	44	47	34
NO	6	14	9	16	4	10	19	14
TOTAL	21	50	24	41	21	54	66	48

The most striking information on Table II-36 is that less than half of the respondents overall replied to the question; however, of those who did, the per cent at every university indicating that there are financial needs for research activities which were not being supported by grants was always much larger than that not noting financial needs.

To determine more exactly the needs for funds, we asked respondents to indicate whether or not they had made formal applications for research in the previous two years, and to inform us as to the amounts that they had requested. Their responses to these questions are summarized in Table II-37.

Table II-37 shows that while 80 per cent responded in Universities A and C, only 50 per cent responded to the question in University B. At all those faculties, less than a third (that is, in terms of absolute numbers, 40 researchers), indicated that they had made applications in the last two years.

TABLE II-37

Q. 62 In searching out funds for research, have you made formal applications in the last two years?

RESPONSE AND AMOUNT	UNIVERSITIES							
	A		B		C		TOTAL	
RESPONSE	N	%	N	%	N	%	N	%
YES	13	31	13	22	14	36	40	29
NO	21	50	16	28	17	44	54	39
TOTAL	34	81	29	50	31	80	94	68
AMOUNT REQUESTED								
$ 1 - 1000	1		5		0		6	
$ 1001 - 3000	3		0		2		5	
$ 3001 - 5000	0		2		2		4	
$ 5001 - 7000	0		1		3		4	
$ 7001 - 10 000	1		1		0		2	
$ 10 000 or more	7		3		6		16	
TOTAL	12		12		13		37	

The response rate in relation to the question about amounts requested is so small that we have not calculated per cent response rates for the details by university. The amount requested most frequently is $10 000 or more. However, judging from the data available, it appears that the pattern differs quite markedly by university. At Universities A and C the category with the highest frequency of response is $10 000, but by contrast, at B, the most popular category is "$1 - $1 000". Again, this may be related to the already-noted heavy teaching load at University B which might not permit the undertaking of long or complicated projects.

It was possible from the responses to the question which heads Table II-37, to compile a list of organizations to which requests for research funds were addressed. Note that this list gives information for all six universities.

TABLE II-38

ORGANIZATION	FREQUENCY
Institute of Research in Education	35
Quebec universities	6
Quebec Government	3
Canada Council	3
Quebec Arts Council	3
Government of Canada	2
Corporation des enseignants du Québec	1
Superior Council of Education	1
Fédération des commissions scolaires catholiques du Québec	1
Royal Society of Canada	1
United States universities	1
Canadian Mental Health Association	1
Comité France-Québec	1
National Social Science Research Council	1
Fitness & Amateur Sports	1
National Defence Education Act (USA)	1
Expo 67	1
Department of Health	1
Commission des écoles catholiques de Montréal	1

The organization attracting most applications is the Institute of Research in Education with 35, followed by Quebec universities with 6, and the Quebec Government, the Canada Council and the Quebec Arts Council, with 3 each. Fourteen other institutions received the other 15 formal applications. The only major sources of funds to which Quebecers apply are Quebec - based. This limitation of outlook probably restricts the sources of financial aid.

To verify the responses summarized in Table II-37, we cross-tabulated them with information about research activity. The findings of this analysis appear in Table II-37 A.

TABLE II-37 A

RESEARCH ACTIVITY RELATED TO REQUESTS FOR FUNDS IN LAST TWO YEARS

RESEARCH ACTIVITY		APPLICATIONS FOR FUNDS IN LAST TWO YEARS	
Having done or currently doing research			
	YES	38%	$p < .01$
	NO	14%	
Ten hours or more per week on research			
	YES	50%	$p < .001$
	NO	22%	

The figures in Table II-37 A show that those who have done or are currently doing research, and those who spend ten hours or more per week on research, are significantly more likely to have made applications for funds in the past two years than those who are not at these research activity levels.

Summarizing from the past few tables, we conclude that the needs for research funds in education are not being fully met. It appears that those who receive funds also are those who make plans for further research. Hence, we feel justified in suggesting that more funds devoted to educational research would yield an increase in activity even giving the present researcher-resources in Quebec.

KINDS OF RESEARCH BEING UNDERTAKEN

Tables II-39 and II-40 give some indication of the areas in which educational research is being undertaken, as well as those fields in which respondents would like to see more research.

Looking at the totals relating to current research (Table II-39) for the three universities, we find that first preference is given to Tests and measurement (43 per cent), and second preference to Educational administration or organization other than finance (36 per cent), and Psychology of learning (35 per cent). A third, and almost as high a frequency of choice is given to Guidance and counseling, Methods of instruction, Teacher training research, and Reading.

That Tests and measurement is most frequently chosen overall can be accounted for largely by the high response rate (62 per cent) at University A, but this is clearly a popular area at the other two universities as well.

University C contributes heavily to the high position of Educational administration whereas the emphasis on Psychology of learning appears to be about equal at all three universities.

When comparing first, second and third choices at each university, it is quite clear that there is considerable specialization of interest between the universities. This is probably a desirable state of affairs in that the three universities are covering much more this way than if they were all attempting to cover the same fields equally.

TABLE II-39

Q. 44A As far as you know in which of the following areas, if any, is research now being undertaken in your faculty?

RESEARCH NOW BEING UNDERTAKEN	UNIVERSITIES							
	A		B		C		TOTAL	
General	N	%	N	%	N	%	N	%
School finance	2	5	1	2	7	18	10	7
Educational administration or organization (other than finance)	16	38	16	28	18	46	50	36
Tests and measurements	26	62	20	34	14	36	60	43
Other research methodology	3	7	12	21	9	23	24	17
Guidance and counseling	16	38	25	43	5	13	46	33
Methods of instruction	19	45	12	21	15	38	46	33
Talent, creativity of students	9	21	3	5	7	18	19	14
Special education	8	19	10	17	18	46	36	26
Psychology of learning	14	33	20	34	15	38	49	35
Child development	11	26	13	22	11	28	35	25
Adolescent development	7	17	3	5	3	8	13	9
School-community relations	6	14	7	12	6	15	19	14
Teacher personality	6	14	11	19	16	41	33	24
Teaching as a profession	6	14	10	17	9	23	25	18
History of education	4	10	19	33	18	46	41	29
Comparative education	4	10	19	33	18	46	41	29
Programmed instruction	22	52	8	14	8	21	38	27
Educational technologies	7	17	5	9	8	21	20	14
Philosophy of education	4	10	13	22	7	18	24	17
Teacher training research	15	36	13	22	17	44	45	32
Sub-cultural differences of students	6	14	9	16	4	10	19	14
Curriculum research in:								
Mathematics	17	40	2	3	7	18	26	19
Natural sciences	0	0	1	2	5	13	6	4
Social studies	11	26	8	14	5	13	24	17
Reading	19	45	18	31	7	18	44	32
Foreign languages	0	0	3	5	4	10	7	5
Other language arts	6	14	5	9	4	10	15	11
Business and distributive education	0	0	1	2	1	3	2	1
Physical education	22	52	19	33	1	3	42	30
Other	7	17	2	3	6	15	15	11
Number of Respondents	42		58		39		139	

The three areas least frequently selected by the respondents were all in the curriculum research area. The lowest one was in the Business and distributive education where all three universities ranked it as one of the three lowest items. The second lowest was in the Natural sciences where Universities A and B ranked it as one of the lowest. Foreign languages was the third lowest in the grand total. In those items not part of the list of curriculum research, the lowest items were School finance and Adolescent development.

In the table referring to areas in which faculty members would like to see more research (Table II-40), the key item is Teacher training research, particularly in Universities A and C (52 and 49 per cent, respectively). However, although only 31 per cent at University B would like more teacher training research, this does represent their highest preference, along with Psychology of learning and Methods of instruction. The fact that the percent totals are lower for University B than for A and C in every area but one - social studies - suggests a smaller commitment to research at University B than at A and C, and this is consistent with the pattern already evident in previous tables.

Other areas in which substantial proportions of respondents would like to see more research include Methods of instruction, Talent and creativity of students, Psychology of learning, School-community relations, and Teaching as a profession.

Again, universities differ in what faculty of education members feel to be desirable areas for research. University B emphasizes Methods of instruction, Psychology of learning, and Teacher training research, and these three fields seem to be very closely related to one another, having practical implications. By comparison, University A respondents seem to be emphasizing a more academic interest - areas such as research methodology, talent and creativity, child development, and adolescent development. Respondents at University C seem somewhat less specialized in their interests than those at the other two universities.

TABLE II-40

Q. 44B ... in which areas would you like to see more research?

DESIRABLE RESEARCH	UNIVERSITIES							
	A		B		C		TOTAL	
General	N	%	N	%	N	%	N	%
School finance	11	26	12	21	12	31	35	25
Educational administration or organization (other than finance)	16	38	14	24	15	38	45	32
Tests and measurements	17	40	11	19	14	36	42	30
Other research methodology	21	50	11	19	13	33	45	32
Guidance and counseling	11	26	6	10	7	18	24	17
Methods of instruction	19	45	18	31	16	41	53	38
Talent, creativity of students	22	52	15	26	15	38	52	37
Special education	12	29	10	17	11	28	33	24
Psychology of learning	19	45	18	31	13	33	50	36
Child development	20	48	14	24	10	26	44	32
Adolescent development	20	48	13	22	11	28	44	32
School-community relations	26	62	11	19	17	44	54	39
Teacher personality	17	40	13	22	14	36	44	32
Teaching as a profession	18	43	16	28	14	36	48	35
History of education	10	24	8	14	12	31	30	22
Comparative education	11	26	9	16	13	33	33	24
Programmed instruction	14	33	13	22	15	38	42	30
Educational technologies	17	40	11	19	15	38	43	31
Philosophy of education	12	29	9	16	15	38	36	26
Teacher training research	22	52	18	31	19	49	59	42
Sub-cultural differences of students	14	33	11	19	13	33	38	27
Curriculum research in:								
Mathematics	9	21	11	19	10	26	30	22
Natural sciences	11	26	11	19	10	26	32	23
Social studies	7	17	13	22	10	26	30	22
Reading	11	26	12	21	9	23	32	23
Foreign languages	10	24	11	19	9	23	30	22
Other language arts	10	24	11	19	10	26	31	22
Business and distributive education	9	21	7	12	8	21	24	17
Physical education	11	26	11	19	11	28	33	24
Number of Respondents	42		58		39		139	

Of the items in which there is little or no desire for more research, most are in the curriculum research area. The lowest rank is shared by Business and distributive education, and Guidance and counseling (in the general field), at 17 per cent. The next lowest is 22 per cent, equally for Language arts, Foreign languages, Social studies, Mathematics and History of education.

Comparing Table II-39 (research being undertaken at present) and Table II-40 (research desirable) probably the most striking finding is that there is actually very little research in the curriculum area, and no strong indication of desire to improve that situation. It is impossible not to comment on this in view of the fact that curriculum research is the particular domain of faculties of education. If faculties of education do not conduct research in psychology of learning, child development or adolescent development, it will be done in other university departments; however, curriculum research, if not done by members of faculties of education, is not likely to be done at all.

The question of curriculum research was explored further on the hypothesis that those who have teacher certification would be more likely to want to see an increase in curriculum research. This analysis is presented in Table II-40 A.

TABLE II-40 A

HAVING A TEACHER CERTIFICATE RELATED TO ATTITUDE CONCERNING CURRICULUM RESEARCH

HAVING A TEACHER CERTIFICATE	WOULD LIKE TO SEE MORE CURRICULUM RESEARCH UNDERTAKEN	
YES	48%	
		n.s.
NO	40%	

Although 48 per cent of those with teacher's certificates would like to see more curriculum research undertaken as compared to only 40 per cent of those without, the difference is not statistically significant.

If curriculum research is needed, it appears that special steps will have to be taken to develop some greater interest in this area.

One might expect, despite the apparently low interest in curriculum research, that members of professional faculties such as education would tend to have a practical orientation to their research. Table II-41 bears on this area.

TABLE II-41

Q. 52 In your present position, do you usually emphasize

a) Research primarily undertaken to test or expand theory
b) Research primarily undertaken to improve practice
c) Both about equally
d) Other

	UNIVERSITIES							
	A		B		C		TOTAL	
EMPHASIS	N	%	N	%	N	%	N	%
Expand theory	6	14	7	12	6	15	19	14
Improve practice	13	31	8	14	8	21	29	21
Both about equally	14	33	10	17	16	41	40	29
Other & no response	9	21	33	57	9	23	51	37
Number of Respondents	42		58		39		139	

With the exception of the very large proportion not responding at University B as compared to Universities A and C, differences between universities appear not to be very marked, but it is clear that research primarily undertaken to improve practice exceeds that mainly undertaken to test or expand theory by a ratio of about three to two. However, among those who do research the modal position is to emphasize both about equally, regardless of university. The fact that only one respondent in five claims to undertake research primarily to improve practice seems to be consistent with the lack of interest in the area of curriculum research, and leads to the same question: if members of faculties of education do not undertake research to improve practice in the field of education, who will?

Another way of studying essentially the same problem is to determine the extent to which educational researchers address themselves to research in professional as compared to academic areas of research. Table II-42 deals with this question.

TABLE II-42

Q. 53 In your present position, do you usually emphasize

a) Research related to a professional area e.g. administration, etc.
b) Research related to an academic area e.g. psychology, philosophy, etc.
c) Both about equally
d) Other

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professional area	4	10	5	9	10	26	19	14
Academic area	17	40	10	17	12	31	39	28
Both about equally	10	24	10	17	5	13	25	18
Other & no response	11	26	33	57	12	31	56	40
Number of Respondents	42		58		39		139	

The information in Table II-42 suggests that research related to an academic area such as Psychology, Philosophy and so on, is generally emphasized over Research related to a professional area, such as Administration. This finding is again consistent with the information already presented vis-à-vis Tables II-39, II-40, and Table II-41, which showed that there is very little research being done in the curriculum area and very little interest in an increased amount of work being done in curriculum. The differences between Universities A and C are not as great as between B and either of the other two universities in this regard. The difference is largely due to the fact that double the proportion of respondents at University B did not reply to this question as compared to the other two universities.

Once again, we must ask: if educational researchers do not study professional education areas, who will? It seems important to try to learn why these areas are not popular - one possibility is that they are "low-prestige" areas - and to learn how to overcome this problem.

A question was asked focusing on the methods of data gathering used in educational research, and Table II-43 summarizes the responses.

Inspection of both past projects and present research shows that there are no real differences between data gathering methods used in the past and in the present. The most common research approach is the experimental, followed closely by the questionnaire and third, by available data studies.

There are slight variations in this by university, but the major reason for differences in the per cents seems to be the lower overall response rate at University B. At University B, experimental, questionnaire, and available data methods receive essentially the same emphasis, whereas at University A, the preference seems to be strongly for experimental research with questionnaire research second; this pattern is reversed at University C, where questionnaire and experimental methods are most popular, in that order.

TABLE II-43

Q. 50 What data gathering methods do you use? Exclude student projects which are not a part of your own basic research.

METHOD Time	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PARTICIPANT OBSERVATION								
Present	3	7	2	3	6	15	11	8
Past	4	10	3	5	6	15	13	9
NON-PARTICIPANT OBSERVATION								
Present	0	0	3	5	4	10	7	5
Past	1	2	3	5	1	3	5	4
INTERVIEW								
Present	7	17	6	10	11	28	24	17
Past	3	7	5	9	8	21	16	12
QUESTIONNAIRE								
Present	12	29	9	16	17	44	38	27
Past	5	12	8	14	12	31	25	18
BIBLIOGRAPHIC								
Present	7	17	7	12	11	28	25	18
Past	1	2	6	10	9	23	16	12
CONTENT ANALYSIS								
Present	9	21	4	7	11	28	24	17
Past	3	7	5	9	9	23	17	12
EXPERIMENTAL								
Present	19	45	10	17	15	39	44	32
Past	14	33	8	14	5	13	27	19
AVAILABLE DATA								
Present	7	17	9	16	10	26	26	19
Past	4	10	7	12	7	18	18	13
OTHERS								
Present	2	5	3	5	2	5	7	5
Past	0	0	3	5	1	3	4	3
Number of Respondents	42		58		39		139	

Analytic approaches are usually related to data-gathering methods. These are summarized in Table II-44.

TABLE II-44

Q. 51 What are your analytic approaches? Exclude student projects which are not a part of your own basic research.

APPROACH Time	UNIVERSITIES A N	A %	B N	B %	C N	C %	TOTAL N	TOTAL %
HISTORICAL								
Present	3	7	8	14	10	26	21	15
Past*	1	2	7	12	9	23	17	12
COMPARATIVE								
Present	2	5	12	21	12	31	26	19
Past	2	5	7	12	10	26	19	14
LOGICAL								
Present	8	19	4	7	6	15	18	13
Past	2	5	3	5	8	21	13	9
THEORETICAL								
Present	11	26	9	16	8	21	28	20
Past	5	12	6	10	6	15	17	12
STATISTICAL (DESCRIPTIVE)								
Present	12	29	10	17	23	59	45	32
Past	12	29	11	19	10	26	33	24
STATISTICAL (INFERENTIAL)								
Present	20	48	10	17	12	31	42	30
Past	13	31	9	16	7	18	29	21
OTHER								
Present	2	5	1	2	1	3	4	3
Past	1	2	1	2	0	0	2	1

* Past: last two years

The key analytic method for the three universities in both present and past research is statistical. This emphasis holds throughout with the exception of present research at University B, where the comparative method is more important than the statistical. Another slight difference is that in past projects, University C has had an equal emphasis on comparative and on descriptive statistical analysis. The comparative and historical methods are more frequently used at University C than at University B and especially than at University A. University A is mostly statistical in approach, with a lighter emphasis on logical and theoretical methods in present research. It is interesting to note that currently, more respondents at University A use inferential than descriptive statistics. This suggests that the level of sophistication of analysis at University A is higher than at the other two universities.

Sources of Data

Respondents were given the opportunity to inform us as to the populations from which they were drawing their data. Table II-45 presents this information.

As the figures in Table II-45 show, the most frequently selected populations from which respondents are drawing their data are in order: teachers, secondary school pupils, and university students. Populations most likely to be ignored include school board members, post-secondary students, pre-school children, parents, university personnel, and CEGEP students. There are variations among universities again on this item. Teachers is first choice at B and C but only third choice at University A. Secondary pupils is the second choice at A and C but does not rank as a premium choice at University B. This seems a little strange in view of the fact noted in Table II-6, that University B has a higher proportion of respondents who have had experience with secondary pupils (over three quarters of them have had experience at this level); however, they are apparently not making use of the contacts which they have. Third choice, university students, comes about as a result of the emphasis on this population by respondents at University A.

TABLE II-45

Q. 49 From what population(s) are you drawing your data for your research?

POPULATION Time	UNIVERSITIES A N	%	B N	%	C N	%	TOTAL N	%
PARENTS								
Present	2	5	6	10	2	5	10	7
Past	5	12	6	10	1	3	12	9
TEACHERS								
Present	9	21	11	19	17	44	37	27
Past	8	19	7	12	8	21	23	17
ADMINISTRATORS								
Present	3	7	8	14	11	28	22	16
Past	2	5	6	10	7	18	15	11
PRESCHOOL CHILDREN								
Present	0	0	1	2	6	15	7	5
Past	2	5	1	2	2	5	5	4
GRADES 1-3 (PRIMARY) PUPILS								
Present	6	14	3	5	10	26	19	14
Past	4	10	3	5	7	18	14	10
GRADES 4-6 (ELEMENTARY) PUPILS								
Present	8	19	4	7	10	26	22	16
Past	7	17	5	9	4	10	16	12
GRADES 7-11 (SECONDARY) PUPILS								
Present	10	24	6	10	14	36	30	22
Past	8	19	5	9	5	13	18	13
CEGEP STUDENTS								
Present	9	21	1	2	8	21	18	13
Past	2	5	1	2	4	10	7	5
POST-SECONDARY STUDENTS								
Present	2	5	1	2	3	8	6	4
Past	0	0	1	2	3	8	4	3
UNIVERSITY STUDENTS								
Present	12	29	9	16	7	18	28	20
Past	6	14	7	12	6	15	19	14
SCHOOL BOARD MEMBERS								
Present	0	0	2	3	1	3	3	2
Past	0	0	2	3	1	3	3	2
UNIVERSITY PERSONNEL								
Present	4	10	4	7	5	13	13	9
Past	3	7	5	9	4	10	12	9
OTHERS								
Present	6	14	5	9	3	8	14	10
Past	2	5	1	2	0	0	3	2
Number of Respondents	42		58		39		139	

The pattern for past projects seems to be almost identical to that of present research, suggesting that faculty members tend to work in areas in which they are familiar.

INTERACTION AND ATTITUDES TOWARD INTERACTION

Since education is a field in which many academic disciplines are relevant, one could expect that interdisciplinary research will be necessary for the solution of many educational research questions. And interdisciplinary research requires collaboration with other researchers. A series of questions was designed to investigate the extent to which faculties of education were in contact with researchers in other faculties and organizations, and to discover some of the attitudes of members of faculties of education toward interaction with other academic, scientific and professional personnel. This section looks briefly at attitudes and patterns of interaction as reported by our respondents.

Table II-46 presents data bearing on opinions as to the extent that other departments should be involved with education graduate students.

TABLE II-46

Q. 39 To what extent should other departments and faculties be involved with graduate students pursuing research degrees in Education?

a) not at all
b) to the extent of providing part of their training
c) to the extent of supervising them in their research when pertinent
d) in evaluating them for the degree
e) other

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Not at all	0	0	0	0	0	0	0	0
Providing part of training	38	90	40	69	32	82	110	79
Supervising research	29	69	38	66	23	59	90	65
Evaluating for degree	30	71	24	41	29	74	83	60
Other	4	10	3	5	2	5	9	6
Number of Respondents	42		58		39		139	

Respondents at University B seem somewhat less positive about interaction than those at Universities A and C, particularly with regard to the evaluation of education students for their graduate degrees.

On the whole, respondents appear to be in favour of involving other departments and faculties. But as Table II-46 A shows, this general favourability is not related to whether or not the respondent is active in research.

TABLE II-46 A

RESEARCH ACTIVITY RELATED TO OPINION CONCERNING THE INVOLVEMENT OF OTHER DEPARTMENTS AND FACULTIES WITH GRADUATE STUDENTS IN EDUCATION

RESEARCH ACTIVITY		OF OPINION THAT OTHER DEPARTMENTS AND FACULTIES SHOULD SUPERVISE EDUCATION STUDENTS IN THEIR RESEARCH WHEN PERTINENT	
Having done or currently doing research			
	YES	65%	n.s.
	NO	65%	
Ten hours or more per week on research			
	YES	63%	n.s.
	NO	66%	

Table II-47 summarizes response patterns relating to interchanges for a variety of specific purposes.

TABLE II-47

Q. 70 Interchange between schools or departments of education and other divisions in the university are achieved in a variety of ways. Which of the following arrangements already exist and which would you like to see established?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PARTICIPATION OF NON-EDUCATION PROFESSORS ON EXAMINATION COMMITTEES FOR THESES								
Already exist	12	29	18	31	18	46	48	35
Would like to see established	19	45	15	26	21	54	55	40
PARTICIPATION OF NON-EDUCATION PROFESSORS IN THE SELECTION OF THE FACULTY OF EDUCATION								
Already exist	3	7	1	2	8	21	12	9
Would like to see established	9	21	9	16	5	13	23	17
INTERDISCIPLINARY COMMITTEES OR SEMINARS WHICH ARE CONCERNED WITH SCHOLARLY ISSUES								
Already exist	8	19	8	14	7	18	23	17
Would like to see established	25	60	29	50	27	69	81	58
JOINT TEACHING APPOINTMENTS								
Already exist	3	7	16	28	11	28	30	22
Would like to see established	22	52	22	38	14	36	58	42
JOINT RESEARCH APPOINTMENTS								
Already exist	1	2	7	12	5	13	13	9
Would like to see established	22	52	23	40	23	59	68	49
VISITING PROFESSORS FROM OTHER FACULTIES OF YOUR UNIVERSITY FOR TEACHING								
Already exist	20	48	16	28	26	67	62	45
Would like to see established	23	55	28	48	20	51	71	51
VISITING PROFESSORS FROM OTHER FACULTIES OF YOUR UNIVERSITY FOR RESEARCH								
Already exist	9	21	3	5	11	28	23	17
Would like to see established	26	62	27	47	27	69	80	58
OTHER TYPES OF INTERCHANGE								
Already exist	2	5	0	0	1	33	3	2
Would like to see established	1	2	3	5	4	10	8	6
Number of Respondents	42		58		39		139	

One unanticipated finding apparent in Table II-47 is that professors are remarkably ill-informed on the policies and practices in their own faculties. Take University A, and the first item, as an instance: nineteen professors "would like to see established" what twelve others state to be in existence already. This makes the interpretation of the information in the table difficult, because what is reported as "facts" is in reality only the perception of facts by respondents, many of whom apparently misperceive. On the assumption, nevertheless, that if a situation is reported by a reasonable number of people, it probably exists, we will attempt to interpret the substance of Table II-47.

Table II-47 shows that "Visiting professors from other faculties of one's university for teaching" and "Participation of non-education professors on examination committees for theses" were probably fairly common forms of interchange at the time of response in the three universities, although there were some differences by university. For example, two thirds of the respondents at University C were aware of visiting professors from other faculties, whereas just over a quarter of the respondents at University B said they were aware that such arrangements existed there.

On the whole, interchange seems more common at University C than at the other two. But such means of interchange as interdisciplinary committees or seminars which are concerned with scholarly issues, joint teaching appointments, joint research appointments, and visiting professors from other faculties for research, although desired by substantial numbers of respondents appear to be relatively rare, or not well publicized.

It is interesting to note that the one form of interaction which obtains very little support from respondents as something they would like to see established is the participation of non-education professors in the selection of the faculty of education. It appears that external interaction is a matter for positive attitudes, but that external control is not desired.

We were interested in the question of whether or not those professors interested in research were also more likely to favour interaction with members of other faculties, not only for research but for teaching activities. We therefore cross-tabulated research activity with the three following items: Participation of non-education professors on examination committees for theses; Joint research appointments; and Visiting professors from other faculties of the university, for teaching. The results of this analysis are presented in Table II-47 A.

TABLE II-47 A

RESEARCH ACTIVITY RELATED TO KINDS OF INTERACTION WISHED FOR

RESEARCH ACTIVITY	KINDS OF INTERACTION		
Having done or currently doing research	Non-Education professors/ theses examination	Joint research appointments	Visiting professors for teaching
YES	46%	58%	54%
	$p < .02$	$p < .001$	$p < .02$
NO	25%	27%	35%
Ten hours or more per week on research			
YES	44%	59%	61%
	n.s.	n.s.	$p < .05$
NO	37%	43%	42%

The results of the analysis presented in Table II-47 A suggest strongly that those who are research-oriented are more favourably disposed to interchange with members of other faculties than those who are not. Those who have done, or are currently doing research are about twice as likely to approve of interchanges on examination committees for theses, of joint research appointments, and of visiting professors for teaching, as those who have not done any research.

Table II-48 gives the opinions of respondents as to the fruitfulness of interchanges which have occurred within the university.

TABLE II-48

Q. 74 In general, in the academic year how fruitful have interchanges been with the academic departments in the university?[2]

	UNIVERSITIES						TOTAL	
	A		B		C			
	N	%	N	%	N	%	N	%
VERY	1	2	0	0	4	10	5	4
MODERATELY	14	33	6	10	9	23	29	21
LITTLE	4	10	9	16	5	13	18	13
NONE OCCURRED	7	17	12	21	9	23	38	27
NO RESPONSE	16	38	31	53	12	31	59	42
Number of Respondents	42		58		39		139	

Table II-48 shows that in regard to the incidence of academic exchanges, either none occurred or there were no replies in 55 per cent of the cases in University A, 74 per cent of the cases at University B, and 54 per cent of the cases at University C, and overall 69 per cent. Because of the small number who provided an evaluation, it is probably not possible to generalize about differences between universities. However, among universities or in the total, the most frequent category was "Moderately" successful.

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[2] There is some question as to the comparability of responses from University B with those from Universities A and C because of a translation equivalence problem. The French questions were sometimes different because organizational structures in the two sets of universities are different. The French version in this case was: "En général, au cours de la présente année académique, les échanges avec d'autres départements ou facultés de l'université ont-ils été fructueux?"

Table II-49 deals with problems encountered with interchanges.

TABLE II-49

Q. 74 Did you encounter any problems with interchanges?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	0	0	3	5	6	15	9	6
NO	20	48	13	22	14	36	47	34
NO RESPONSE	22	52	42	72	19	49	83	60
Number of Respondents	42		58		39		139	

In terms of encountering problems with the interchanges, a majority did not reply; of those who did, only nine encountered problems. This would suggest that few problems occurred, since few respondents took advantage of the opportunity to indicate dissatisfaction.

Comments specifying the nature of the problems indicated interfaculty rivalry, administrative difficulties including indifference, reliance on social meetings and colloquia which are inadequate, and mistrust of educational research[3] and its measurement techniques. One respondent sensed the low prestige of education and educators as a drawback in interchanges with other academic departments.

An important question is whether or not interchange is related to research activity on the part of faculty members. By ignoring the degree of fruitfulness of interchange, and simply breaking the respondents into two groups - those who did have interchange and those who did not, we were able to make the interchange - research activity analysis, the results of which appear in Table II-48 A.

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[3] This may have been quite justified in the light of the low consensus on the part of education professors as to what constitutes educational research. See p. 57.

TABLE II-48 A

RESEARCH ACTIVITY RELATED TO OCCURRENCE OF INTERCHANGES

RESEARCH ACTIVITY		INTERCHANGE		
		Yes	None occurred	
Having done or currently doing research				
	YES	43%	57%	
				$p < .02$
	NO	22%	78%	
Ten hours or more per week on research				
	YES	52%	48%	
				$p < .01$
	NO	29%	71%	

Table II-48 A supports the view that those involved in research activity are more likely to be involved in collaboration activities with members of other university departments than those not involved in research. This relationship is statistically significant, and is observed both for those who have done or are currently doing research, and for those who spend more than ten hours per week on research as compared to those who spend less time or more in this activity.

We have dealt with stated opinions about interchange with other researchers, in the immediately preceding tables. Our data may be somewhat suspect, however, since to state that one is in favour of working with others is probably "socially correct". Perhaps actual experience of working with others is a better indicator of the strength of favourability, on the assumption that the more favourable one is, the more likely one will take steps to collaborate with others. The data presented in Table II-50 relate to this idea.

TABLE II-50

Q. 71 In this academic year to what extent have you worked together with other scientific personnel in your research activities?

	UNIVERSITIES							
	A		B		C		TOTAL	
FREQUENCY OF WORK WITH OTHERS	N	%	N	%	N	%	N	%
a) RESEARCHERS IN OTHER ORGANIZATIONS								
Often*	5	12	2	3	12	31	19	14
Seldom	6	14	7	12	7	18	20	14
Never & no response	31	74	49	84	20	51	100	72
b) COLLEAGUES IN YOUR ORGANIZATION								
Often	21	50	9	16	15	38	45	32
Seldom	5	12	8	14	9	23	22	16
Never & no response	16	38	41	71	15	38	72	52
c) RESEARCH ASSISTANTS (NOT STUDENTS)								
Often	8	19	1	2	7	18	16	12
Seldom	5	12	3	5	6	15	14	10
Never & no response	29	69	54	93	26	67	109	78
d) RESEARCH ASSISTANTS (STUDENTS)								
Often	13	31	7	12	8	21	28	20
Seldom	4	10	4	7	4	10	12	9
Never & no response	25	60	47	81	27	69	99	71
e) STUDENT AIDES								
Often	9	21	1	2	7	18	17	12
Seldom	8	19	6	10	3	8	17	12
Never & no response	25	60	51	88	29	74	105	76
f) CONSULTANT (SPECIFY FIELD)								
Often	9	21	2	3	9	23	20	14
Seldom	4	10	1	2	4	10	9	6
Never & no response	29	69	55	95	26	67	110	79
FREQUENCY OF WORK FOR OTHERS								
a) AS CONSULTANT								
Often	6	14	7	12	10	26	23	17
Seldom	3	7	2	3	1	3	6	4
Never & no response	33	79	49	84	28	72	110	79
b) AS ASSISTANT								
Often	6	14	2	3	5	13	13	9
Seldom	6	14	2	3	2	5	10	7
Never & no response	30	71	54	93	32	82	116	83
Number of Respondents	42		58		39		139	

* "Often" includes replies to OFTEN and VERY OFTEN

In Table II-50, those who did not respond were added to the "never" response on the assumption that where collaboration had taken place, the respondents would have informed us.

The most striking information in the table is the fact that less than half ever work together even with colleagues in their own organizations, and that only about a quarter indicate that they have worked with researchers in other organizations, research assistants, student aides, or consultants. Respondents are even less likely to have worked for others, especially as assistants.

One fact which emerges from Table II-50 is that in all categories, the per cent of respondents at University B working together with other scientific personnel is lower than at Universities A and C. This is consistent with two facts: first, respondents at University B do less research than those elsewhere (Table II-66, p.163); and second, they are less in favour of working with others than respondents in the other universities (see Table II-46).

To some extent, professors develop inter-organizational contacts through their own training background and through contacts made at meetings of learned societies. We were interested in knowing where the persons referred to in Table II-50 were located; this information is listed in Table II-51.

Table II-51 shows that just over half of the contacts are in Quebec (72 of a total of 143); of those that are elsewhere, the majority are in the rest of Canada (22) and the United States (20). The only other large group is in France (14). As might be expected, respondents in the English university did not interact with persons in French-speaking countries such as France, Belgium, and Switzerland. However, and perhaps more surprising, the research contacts of professors at the two French universities are quite different, the out-of-Quebec French language contacts at University A being apparently more important than those at University C, where 16 had interaction with Canadian and American researchers, and only 10 with researchers in European French-speaking countries.

TABLE II-51

Q. 72 Where are the persons referred to in Q. 71 located?

	UNIVERSITIES			
	A	B	C	TOTAL
	N	N	N	N
QUEBEC	27	21	24	72
REST OF CANADA	6	8	8	22
UNITED STATES	4	8	8	20
FRANCE	7	0	7	14
UNITED KINGDOM	0	2	0	2
BELGIUM	5	0	0	5
SWITZERLAND	2	0	3	5
OTHER	1	0	2	3
TOTAL				143

Research work involves educational researchers not only with other scientific personnel, but with other educational personnel as well, both as assistants and as sources of data. This degree of involvement is summarized in Table II-52.

As in Table II-50, and for the same reasons, the no response data have been added to the "never" category.

One thing which emerges immediately from the data in Table II-52 is the consistently smaller proportion of respondents replying to this particular question at University B, regardless of the category of personnel. This is part of a consistent pattern of less research involvement at this university.

TABLE II-52

Q. 73 In this academic year to what extent has your research work involved you in direct interaction with other educational personnel?

	UNIVERSITIES						TOTAL	
	A		B		C			
	N	%	N	%	N	%	N	%
a) DIRECTORS-GENERAL								
Often	3	7	1	2	11	28	15	11
Seldom	4	10	1	2	5	13	10	7
Never & no response	35	83	56	97	23	59	114	82
b) SCHOOL PRINCIPALS								
Often	6	14	8	14	17	44	31	22
Seldom	12	29	4	7	7	18	23	17
Never & no response	24	57	46	79	15	38	85	61
c) SUPERVISORS OF SUBJECTS								
Often	7	17	7	12	6	15	20	14
Seldom	5	12	1	2	3	8	9	6
Never & no response	30	71	50	86	30	77	110	79
d) OTHER SCHOOL ADMINISTRATORS								
Often	1	2	2	3	6	15	9	6
Seldom	3	7	1	2	1	3	5	4
Never & no response	38	90	55	95	32	82	125	90
e) TEACHERS								
Often	15	36	8	14	20	51	43	31
Seldom	3	7	5	9	3	8	11	8
Never & no response	24	57	45	78	16	41	85	61
f) PROFESSORS								
Often	16	38	6	10	15	38	37	27
Seldom	4	10	11	19	4	10	19	14
Never & no response	22	52	41	71	20	51	83	60
g) PUPILS								
Often	12	29	10	17	17	44	39	28
Seldom	4	10	3	5	2	5	9	6
Never & no response	26	62	45	78	20	51	91	65
h) TEACHER ORGANIZATIONS								
Often	2	5	1	2	6	15	9	6
Seldom	7	17	4	7	6	15	17	12
Never & no response	33	79	53	91	27	69	113	81
Number of Respondents	42		58		39		139	

The overall response rate is very small. In the case of no category of personnel does the contact exist for more than 40 per cent of the respondents. A majority of professors of education do not have contact with any particular category of other educational personnel during the year for research reasons, regardless of their university, and regardless of the category of personnel.

Adding the response categories seldom and often, the most frequently contacted personnel, in order, are professors, teachers, school principals, and pupils. These people tend to be a part of the usual interaction system of professors in faculties of education (for purposes of student teaching, for example), which would suggest that researchers exploit their normal contacts for research purposes.

Summarizing this section, it would seem that those who accuse professors of living in an "ivory tower", out of contact with the field and interested in rather impractical, esoteric studies, may have some grounds for their ideas, at least in the case of our responding professors of education, who apparently like to carry on non-curricular research of an academic rather than professional orientation, having as little as possible to do with other individuals, either researchers or professional educators.

PROBLEMS RELATED TO THE CONDUCT OF RESEARCH

It is easy to draw conclusions such as those suggested in the immediately preceding remarks. But it may very well be that there are factors in faculties of education that make interaction concerning research difficult, unlikely, or even impossible. These may include traditions related to tasks other than research, shortages of many things including equipment, bibliographic resources, information, personnel, research budgets, and other items essential to the successful conduct of educational research. These are the problems explored in this part of this chapter.

The first question in this section deals with how the respondents perceived the degree of emphasis on research in their faculties as compared to other faculties in their own universities. The comparisons are made in Table II-53.

TABLE II-53

Q. 33 How would you compare the relative importance given to research in your faculty as compared to your university as a whole?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
GREATER	2	5	1	2	1	3	4	3
EQUAL	8	19	4	7	7	18	19	14
LESSER	22	52	39	67	15	39	76	55
I DON'T KNOW	10	24	14	24	16	41	40	29

Table II-53 shows that, as a majority of respondents perceive it, faculties of education put less emphasis on research than other faculties in the universities.

Table II-54 deals with the need for equipment to carry out research activities.

TABLE II-54

Q. 63 Do you need any equipment not available to you for your present projects or any that you would like to carry out.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	11	26	10	17	8	21	29	21
NO	12	29	16	28	15	38	43	31
TOTAL	23	55	26	45	23	59	72	52

Only about half of the respondents answered the question about the need for equipment not available for present research. This would suggest that, together with the 31 per cent who said they had no need for such equipment, about four of five respondents did not feel a pressing need for equipment.

One important facility for research is the library. We asked respondents to comment on the availability of bibliographic resources relevant to their research work, and we have summarized their responses in Table II-55.

TABLE II-55

PER CENT WHO FEEL THAT LOCALLY AVAILABLE RESOURCES RELEVANT TO THEIR RESEARCH WORK ARE POOR

	UNIVERSITIES			
	A	B	C	TOTAL
	%	%	%	%
Current journals	19	10	21	16
Bound periodicals	26	17	21	21
Research reports, final	40	21	49	35
Ongoing research, pre-publication	45	31	49	40
Abstracts	36	19	41	30
Microfiches	24	21	51	30
Microfilms	31	17	54	32

Table II-55 shows the per cent of respondents at each of the three universities who replied that the availability of the specified resource was poor.

The results show the greatest satisfaction with current journals and bound periodicals, especially at University B. On the other hand, there appears to be a serious shortage of reports on research both completed and on-going.

There is considerable variation among universities. In terms of respondent perception at least, library resources relevant to research are most generally satisfactory at University B, and least satisfactory at University C, where about half of the respondents took the trouble near the end of a long questionnaire to cite the inadequacy of research reports (ongoing and final), microfiches, and microfilms.

More detailed information about the perceived availability of bibliographic resources in the three universities, are presented in Appendix II-7. In addition, Appendix II-8 gives the perceived availability of bibliographic resources from outside sources.

The response rate to the question about bibliographic materials from outside sources is smaller than that about locally available resources. This may indicate that some respondents are not aware of what is available from outside sources. Those who do respond, however, give the impression that they find outside sources generally adequate. It seems from this low response rate that there is very little interaction among universities in the matter of sharing research or library resources. Perhaps this is a basis for considering the development of a master index in each university library listing the holdings of all Quebec universities.

We have already noted in Table II-55 that the bibliographic resource least adequate to research needs is research reports concerning on-going research. More directly, we asked: "Do you feel the need for information about on-going incomplete research at the pre-publication stage?" The results are given in Table II-56.

Eighty three per cent of all respondents replied to this question. Seventy one per cent across the board expressed the need for information about on-going research at a pre-publication stage. All of the respondents in Universities A and C who replied to this question (over 90 per cent) replied in the affirmative. However at University B only 69 per cent replied and of those who did, there were nearly as many who did not feel the need for such information as those who did.

TABLE II-56

Q. 65 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

	UNIVERSITIES							
	A		B		C		TOTAL	
RESPONSE	N	%	N	%	N	%	N	%
YES	39	93	23	40	36	92	98	71
NO	0	0	17	29	0	0	17	12
TOTAL	39	93	40	69	36	92	115	83

If one takes the non-respondents at University B, that is 18, and adds to them the 17 replying no, one must come to the conclusion that roughly two thirds of the members at University B do not feel the need for information about incomplete research at a pre-publication stage. This may be a reflection of a smaller research interest at University B; however, it may also result in part from easier access to such information in the English-speaking world than for researchers in French-Canadian universities.

Another problem in undertaking research might arise from difficulty of access to the sources of data. Table II-57 deals with this.

TABLE II-57

Q. 67 How accessible is the population from which you would like to draw your data?

	UNIVERSITIES							
	A		B		C		TOTAL	
ACCESSIBILITY	N	%	N	%	N	%	N	%
Readily accessible	17	40	13	22	19	49	49	35
Not very accessible	8	19	6	10	5	13	19	14
Not accessible	0	0	0	0	1	3	1	1
TOTAL	25	60	19	33	25	64	69	50

Table II-57 shows that only one person out of the 139 claimed that he would like to draw data from a population which is inaccessible. On the whole, the response rate to this item was small, only half responding, and as with other items of this type, the response rate was much lower in University B than in Universities A and C.

Of those who responded, regardless of university, more than two thirds said that their populations were readily accessible. It is possible however that projects are designed only for those populations that the researchers know are available. But our conclusion must be that accessibility of the populations from which educational researchers like to draw data is not a serious problem. This is further dealt with in Table II-58.

TABLE II-58

Q. 68 Are there any needs for data that are not met?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	7	17	4	7	6	15	17	12
Number of Respondents	42		58		39		139	

On the whole, only 12 per cent say that there are needs for data which are not being met. Numbers between universities are too small to make valid comparisons. But Table II-58 supports our conclusion that needs for data are not a problem for most educational researchers.

The conduct of research often incurs expenses of various kinds, and the availability of research budgets are certainly an important resource to researchers. Respondents were asked: "Is there a research item on your faculty's budget?" Their replies are presented in Table II-59.

TABLE II-59

Q. 35 Is there a "research" item on your faculty's budget?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	25	60	39	67	5	13	69	50
NO	2	5	3	5	11	28	16	12
I DON'T KNOW*	15	36	16	28	23	58	54	39
Number of Respondents	42		58		39		139	

* I DON'T KNOW and NO ANSWER combined.

One of the most interesting findings in this table is that more than a third of faculty members over all three universities do not seem to know whether or not there is a research item in their faculty's budget. This ranges from a low of 28 per cent at University B through 36 per cent at University A and to a high of 58 per cent at University C.

Further, at University C, of those who do attempt to respond there is substantial disagreement as to whether or not there is a research budget.[4]

Services and Personnel

Active research organizations generally obtain access to a variety of necessary services and auxiliary personnel in order to facilitate the activities of their researchers. Where such services or personnel are necessary but not available, research is hampered. Table II-60 provides an indication of these needs.

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[4] In fact, at the time of our survey and as can be seem from the deans' responses, there was no research item on the faculty's budget at University C, but there was one both at University A and at University B.

TABLE II-60

PER CENT INDICATING SERVICES AND PERSONNEL AS NECESSARY BUT NOT AVAILABLE

	UNIVERSITIES			
	A	B	C	TOTAL
SERVICES	%	%	%	%
Guidance to Sources of Funds	26	12	49	25
Data Bank	17	16	26	19
Information Retrieval	5	16	18	13
Census-type Data	10	12	15	12
Documentation	2	10	10	8
Computer Services	2	2	5	3
PERSONNEL				
Secretary	26	36	26	30
Typist	17	29	26	25
General Clerical	12	33	23	24
Non-Student Research Assistants	17	26	28	24
Translator	19	28	23	24
Student Research Assistants	17	19	41	17
Technicians	17	19	13	17
Research Design Consultant	7	10	13	10
Computer Programmers	2	16	3	8
Statistics Adviser	2	10	3	6

From the responses presented in Table II-60, it appears that there is least need for computer services, computer programmers, statistics advisors, documentation services, and research design consultants. Either these are not needed for the type of research being undertaken, or they are generally available to university researchers - and we have reason to believe that the latter is true. For example, we know that each of the three universities has a well-organized computer and computer programming service.

The service most needed seems to be guidance to sources of funds, especially at University C, where half the respondents checked this item.

There appears to be a greater need for personnel than for services, and this need appears to be felt in all three universities. Thirty per cent of the respondents require secretarial assistance, and typists, general clerical helpers, and translators are considered necessary by about a quarter of the respondents. About the same proportion of respondents indicate a need for non-student research assistants.

Apparently, services and personnel for research are in best supply at University A, where the per cent responding is usually smaller (and in no case larger) than that for the three universities combined; but the differences are not very large (Appendices II-9 and II-10).

One word of caution is advisable in interpreting the meaning of the figures in Table II-60. The per cents seem relatively small; but when one considers that fewer than half of the respondents (43 per cent) were actually involved in research at the time of responding to these questions, the per cents presented in Table II-60 seem much more serious. This seriousness is demonstrated in Table II-60 A, which compares needs to research activities.

In the analysis presented in Table II-60 A, we have taken four of the areas in which respondents indicated serious need and compared them to past or current research activities, and to spending ten hours or more per week on research. In every case, the association between research activity and need is positive and statistically significant. A number of interpretations of these relationships are possible. The most plausible suggests that active involvement in research on the part of a professor increases his perceived need for auxiliary personnel. If there actually is a shortage of such personnel in faculties of education, this may help to account for low research productivity in these faculties.

TABLE II-60 A

RESEARCH ACTIVITY RELATED TO OPINION THAT PERSONS WHO ARE NOT AVAILABLE ARE NECESSARY

RESEARCH ACTIVITY	PERSONNEL NECESSARY BUT NOT AVAILABLE			
Having done or currently doing research	Secretary	Typist	Student research assistant	Guidance to sources of funds
YES	37%	29%	22%	31%
	p< .01	p< .05	p< .05	p< .01
NO	16%	14%	8%	10%
Ten hours or more per week on research				
YES	46%	37%	30%	41%
	p< .01	p< .02	p< .01	p< .001
NO	24%	19%	12%	17%

Open-ended questions

In a questionnaire where responses are coded for ease in computing, it is not always possible to give the respondents an opportunity to make the type of response that they desire. With this in mind we included two open-ended items, the first referring to their own organization and the second to outside agencies. Responses from these items were classified and it was observed that they tended to support the earlier coded replies.

> Q. 75 In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions.

Money is mentioned more frequently than any other specific subject, 16 replies referring to the need within their university for larger budgets or grants. The researchers also indicate the need for a type of documentation or information retrieval, eleven commenting along these lines.[5] Ten replies include mention of a lighter teaching load and eight replies refer to time for research, both subjects closely related to maintaining research productivity. The need for more teaching staff, student aides, and secretarial help is included in twelve replies. Six respondents feel that more time for research would be available if they were freed from administrative and committee work. Six respondents indicate a need for publication in Quebec of their research. Respondents mention a variety of technical areas in which they would like help, such as data processing services, consultants in statistics and other consultant services, and a secretariat for research. A broad category of responses refer to internal structures of their faculty with a view to improving research capability, 17 comments being related to this group.

The second of the open-ended questions was the following:

> Q. 76 Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher? Try to indicate roughly the order of importance of your suggestions.

In response to the above question, subjects indicate a number of needs, the most frequently mentioned being the need for financial support. Forty respondents report a shortage of funds, and in addition, five request information about sources of grants. (This finding is consistent with data already presented in Table II-60.)

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[5] While this is consistent with the conclusions following Table II-60, it is interesting to note that many of those who check a need for information retrieval take pains to refer to this need again, given the opportunity of an open-ended question. Apparently, where this need is felt, it is important.

The second most frequently mentioned subject is the need for information. Eight respondents suggest that documentation, i.e. information about the research of others, would be useful; and twelve indicate a desire for assistance in the publication of their own research.

A frequent comment criticizes the I.R.E. for slow administrative procedures, and it is obvious that some respondents feel concern that I.R.E. policies impose restrictions on the nature and quality of their work. There seems to be an implication on the part of some that granting agencies may be inclined to make decisions in professional areas in which they are not competent to judge, for example, quality of proposal, research design, and so on.

The obligation to fill forms in detail, and to submit interim reports, is seen as an unnecessary, time-consuming demand imposed by the granting agencies. Procedural demands of this kind, but made by the researchers' own organization, lead some to suggest that grants be given to individuals as well as to organizations such as universities. Apparently, "red tape" is seen as a serious problem.

Unfortunately, many other requests of respondents, if met, would require the initiation of further administrative procedures, and in general, increase the amount of "red tape". For example, six subjects request procedures which would favour exchanges among researchers in given fields; others desire technical assistance and consultation. These would entail time-tabling and control procedures from some central coordinating agency.

There is confirmation of responses to earlier questions, indicating the need for practical assistance and personnel to aid in the conduct of research, as well as the need for space, equipment, and time for research. Some respondents give more specific suggestions, such as the reduction of teaching loads, and the provision of student aides.

Two of the respondents feel that a real contribution to their efforts would be the declaration by I.R.E. of their own particular research field as high-priority areas!

On first glance, it may seem that respondents reply to the two above questions in much the same way. However, a simple analysis of the frequency of mention of some items suggests that they look to their own faculty for the provision of certain needs, and to the I.R.E. and other granting agencies, for other needs. Among the former are lighter teaching load, time for research, larger staff, and freedom from administrative and committee work. As for the granting agencies, they are seen as proper sources of financial support, documentation, and publication assistance.

TRAINING OF RESEARCHERS

To this point, we have focused our attention mainly upon those factors which might have a bearing on the research productivity of the professors in the faculties of education. But no study of research potential would be complete without studying the graduate students in education, who should be a major source of future educational researchers, and in fact, through their thesis research, a current research resource.

Not all graduate students in education are enrolled in programs which promise research productivity. As mentioned in Chapter I, professional graduate programs such as the M.Ed. do not require a thesis, and therefore do not result in the production of research. The potential research productivity in education is probably closely related to the proportion of graduate students enrolled in research graduate programs as compared to the proportion in professional graduate programs. Table II-61 makes this comparison.

TABLE II-61

Q. 30 Into what kind of graduate degree are students in your faculty most generally directed?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professional	21	50	29	50	9	23	59	42
Research	4	10	8	14	4	10	16	12
Neither	3	7	3	5	8	21	14	10
TOTAL	28	67	40	69	21	54	89	64

Table II-61 shows that, as professors perceive the situation, only about one student in five is directed into a research graduate program. This seems consistent with the observation of the deans (see Chapter I, p. 13) that very few students are preparing themselves for research careers.

To check on the opinions of the professors, we asked them to indicate into what kind of graduate program they felt students should be directed. Their answers are summarized in Table II-62.

TABLE II-62

Q. 31 Into what kind of graduate degree program do you feel students should be directed?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Professional	6	14	7	12	6	15	19	14
Research	15	36	5	9	11	28	31	22
Neither	3	7	14	24	6	15	23	17
TOTAL	24	57	26	45	23	59	73	53

A major fact in Table II-62 is that only half of the respondents replied to this question at all. Of those who did, about a quarter regardless of university, felt that students should be directed into professional graduate degrees.

The great divergence between the three universities is in the proportion who feel that students should be directed into graduate degree programs in research, from a low of 9 per cent in University B, through a moderate position of 28 per cent at University C, to the high position of 36 per cent in University A.

Another important finding in Table II-62 is that more than half of the respondents in University B who reply to this question feel that students should not be directed into either program, whereas this is true of very few in Universities C and A.

Perhaps the way to interpret this contrast is to assume that respondents at University B believe that the choice should be available, but that the decision as to which to choose should be left up to the student.

Respondents were given the opportunity to make comments in addition to their pre-coded responses to this question, and about half of the respondents did so. In fairness, we must say that some respondents found the questions confusing, and even ambiguous. The others can be classified into three broad categories: those who prefer a professional orientation (10 respondents); those who prefer a research orientation (19 respondents); and those who prefer both (33 respondents).

Reasons given for preferring professional training include the urgency for teacher training, the idea that practical experience should precede training in research, that not all students are suited to research careers, and that teachers with a practical training are more sympathetic to students than those with a theoretical one.

Respondents expressing a preference for research oriented training feel that research is the basis for scholarship, and that research attitudes would make for more imaginative, less mechanical teaching. One thinks that the classroom is the ideal place to do educational research. It is also mentioned that the research training provides a better base for later graduate work.

As already indicated, the largest group making comments are those who prefer no particular emphasis, or that students should make their own choice; among them are those who feel that both are preferable; they argue for balanced training for the benefit of both the student and the educational community. Other points raised are as follows: the emphasis of both in the same student would tend to bring research findings into practice sooner; distinct patterns of training, emphasizing one or the other in individual students, would help to meet the needs of the educational community; and different programs should be available to enable students to meet their own needs, or to provide for their interests and aptitudes.

Finally, we feel that it would be worthwhile to quote one respondent, who stated:

> "I believe we could do a better job of producing researcher students - but most opt for a professional degree which offers most immediate benefits in a school system. Some who enter with a bias towards research, thesis, etc. are steered towards professional preparation. At the moment we produce two or three per year who subsequently adopt research, or could do so. For most candidates, it is right that they should have a professional training - they are unwilling or unable to develop the skills necessary for research. They don't want to find out - they want to be told."

Emphasis on doctoral relative to Master's program

If research training is to be carried out at a really sophisticated level, it will be necessary to emphasize a research doctoral program. We asked respondents to compare the emphasis of the doctoral to the Master's program. The results are summarized in Table II-63.

TABLE II-63

Q. 36 In your estimate, what is the emphasis given to the doctoral program relative to the master's program, a) in the province in general, b) in your school?

EMPHASIS	UNIVERSITIES							
	A		B		C		TOTAL	
Location	N	%	N	%	N	%	N	%
GREATLY INSUFFICIENT								
In the province	9	21	15	26	11	28	35	25
In your school	9	21	12	21	5	13	26	19
INSUFFICIENT								
In the province	18	43	15	26	12	31	45	32
In your school	13	31	12	21	17	14	42	30
SUFFICIENT								
In the province	3	7	8	14	3	8	14	10
In your school	8	19	13	22	11	28	32	23
EXCESSIVE								
In the province	1	2	1	2	0	0	2	1
In your school	2	5	0	0	0	0	2	1

There is general consensus among the respondents that the emphasis on the doctoral program relative to the Master's program is insufficient. In the province, in regard to the respondents' own university, it is almost as clear a judgment that the doctoral program is not receiving adequate emphasis relative to the Master's program. In fact, about half of all the respondents consider it either insufficient or greatly insufficient. Otherwise, the differences among universities in regard to this issue are not striking. Respondents always perceive their own university as being more adequate than the province at large.

We have already shown that many respondents feel that graduate students should be directed into a research graduate program. Table II-64, which follows, deals with the emphasis being given to the research graduate program relative to the professional graduate program in the estimation of the respondents.

TABLE II-64

Q. 37 In your estimate, what is the emphasis given to the research graduate program relative to the professional graduate program, a) in the province in general, b) in your school?

EMPHASIS Location	UNIVERSITIES A N	A %	B N	B %	C N	C %	TOTAL N	TOTAL %
GREATLY INSUFFICIENT								
In the province	11	26	5	9	14	36	30	22
In your school	12	29	4	7	11	28	27	19
INSUFFICIENT								
In the province	19	45	17	29	15	38	51	37
In your school	17	40	19	33	17	44	53	38
SUFFICIENT								
In the province	0	0	9	16	1	3	10	7
In your school	4	10	13	22	7	18	24	17
EXCESSIVE								
In the province	1	2	4	7	0	0	5	4
In your school	1	2	4	7	0	0	5	4

In general, respondents feel that the emphasis given to the research graduate program is insufficient or greatly insufficient, both in the province, and in the respondents' own faculties. Comparing patterns at the different universities, respondents at University B have a different opinion from those of Universities A and C; about 23 per cent find the emphasis sufficient or excessive in the province, whereas virtually none in A or C take this position. With regard to the situation in their own school, the pattern is similar: 29 per cent of the respondents in University B feel that the emphasis given to the research program relative to the professional graduate program is sufficient or excessive, whereas only 18 per cent in University C and 12 per cent in University A take such a stand. Clearly, respondents feel that research graduate programs need more emphasis.

Summer School

Much of the graduate work done in education is related to the fact that, since public schools are closed during July and August, it is possible for teachers to devote time to study in the summer. In fact, almost 90 per cent of graduate students in education are enrolled in part-time or summer programs.[6]

Respondents were asked to compare the quality of degrees obtained through summer school programs to those achieved during regular sessions. Their answers are summarized in Table II-65.

TABLE II-65

Q. 41 Do you feel that the quality of a graduate research degree achieved through summer school sessions relative to one achieved during regular sessions is:

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Better	1	2	0	0	0	0	1	1
Equivalent	7	17	10	17	9	23	26	18
Poorer	23	55	26	45	20	51	69	50
Qualitatively different	10	24	13	22	7	18	30	22
TOTAL	41	98	49	84	36	92	126	91

There is general agreement indicated in Table II-65. A majority of respondents at all universities feel that a graduate research degree achieved through summer school sessions is poorer than one achieved during regular sessions.

Summarizing this part of the chapter, then, we must conclude that graduate students in education, because of their tendency to be enrolled in part-time Master's programs not requiring research, are not as promising a source of future researchers as one familiar with graduate students and programs in other faculties might expect.

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[6] See Chapter I, Table I-2, p. 9.

RESEARCH PRODUCTIVITY

In a number of instances thus far, we have dealt with the research activities of professors of education in relation to some other variable in order to show factors associated with research activity.

In this final section of the chapter, we present in a summary table (Table II-66) several indicators of research productivity, relating to the past, present, and future.

TABLE II-66

RESEARCH ACTIVITY: NUMBERS OF PROJECTS COMPLETED, AND UNDER WAY, - PERCENTS. HOURS PER WEEK SPENT ON RESEARCH.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PAST PROJECTS COMPLETED								
One	12	29	9	16	11	28	32	23
Two	9	21	7	12	4	10	20	14
Three	4	10	9	16	11	28	24	17
Total	25	60	25	44	26	66	76	54
REPORTED PROJECTS IN ADDITION TO THE ABOVE								
One	2	5	6	10	6	15	14	10
Two	2	5	2	3	1	3	5	4
Total	4	10	8	13	7	18	19	14
PROJECTS CURRENTLY UNDER WAY								
One	12	29	7	12	10	26	29	21
Two	8	19	3	5	5	13	16	11
Three	3	7	5	9	7	18	15	11
Total	23	55	15	26	22	57	60	43
HOURS PER WEEK SPENT ON RESEARCH								
None	11	26	32	55	12	31	55	40
1 - 4	6	14	6	10	4	10	16	12
5 - 9	6	14	12	21	8	20	26	19
10 - 14	6	14	4	7	6	15	16	12
15	13	31	4	7	9	23	26	19
Number of Respondents	42		58		39		139	

Past Projects Completed

Universities A and C are quite similar with respect to the proportion of respondents who have completed projects in the past (60 per cent and 66 per cent, respectively). Respondents at University B are somewhat less likely to have completed research in the past, only 44 per cent being in this category. In view of the usual requirement for faculty members to have graduate degrees, what is surprising about these figures from the first section of Table II-66 is the fact that almost half of the respondents overall (and more than half at University B) have never completed research projects. Although we have no empirical basis of comparison, we surmise that this must be considerably lower than in many other university faculties.

Reported Projects in Addition to the Above

This section of Table II-66 shows that a rather small proportion of professors of education - only about one in seven - have completed more than three research projects. There are no marked differences among the three universities in regard to this. Again, this figure appears to be low. There seem to be relatively few professors of education who have had active research careers over very many years.

Projects Currently Under Way

The number of professors of education having research projects currently under way is somewhat smaller at Universities A and C[7] and very much smaller at University B, than that of those having completed projects in the past. It is clear that not all professors are making use of their research training and experience in their current activities, especially at University B. The fact that only 43 per cent of professors of education are currently engaged in research projects suggests that research may not be a major part of the role definition of members of faculties of education in Quebec. It is probable that the professional activities, - teacher-training and services to the educational community in general, - absorb a major part of the time of professors of education, leaving only a few hours per week (or none) for research in a majority of cases. The next section of Table II-66 deals with this aspect of the time per week spent on research.

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[7] The proportion at University C is comparable to that at University A and larger than at University B. However, it should be remembered that respondents at University C had a much broader definition of what constitutes research (see p. 59). Therefore, it should be understood that the figures for University C may be somewhat inflated by comparison to universities which have a more restrictive definition of research.

Hours Per Week Spent on Research

The number of respondents who claim they spend no time per week on research is somewhat smaller than the figures in the section "projects currently under way" would lead us to expect. However, it may be that some professors of education spend some time on research without actually having projects of their own.

In our analyses relating certain variables to research activity, we arbitrarily dichotomized time spent per week on research at ten hours, because we felt that less than ten hours per week would not constitute a major commitment. If we use this same criterion we find that the per cents of respondents with a major commitment to research at Universities A and C are 45 and 38 respectively; however, at University B, the per cent drops to 14 - only about a third of the figures in the French universities. Hence, we find that not only are respondents at University B less likely to undertake research than other professors of education, but that those who do are less likely to make a major time commitment to educational research.

RESEARCH PLANS

Respondents were asked to indicate whether or not they had any plans for educational research in the next two years. Their answers are summarized in Table II-67.

TABLE II-67

Q. 48 Do you have any research plans related to education for the next two years?

	UNIVERSITIES							
	A		B		C		TOTAL	
PLANS	N	%	N	%	N	%	N	%
YES	26	62	21	36	33	85	80	58
NO	3	7	15	26	2	5	20	14
TOTAL	29	69	36	62	35	90	100	72

With regard to research plans for the next two years, a total of 72 per cent of all respondents at Universities A, B and C replied to this question. A majority at Universities A and C, (62 per cent and 85[8] per cent respectively) replied YES. However, at University B only 36 per cent claimed to have any plans for research in the next two years.

It may be argued that this kind of question is almost certain to elicit a positive response. However the fact that the positive response at B is so much smaller than at A and C is particularly significant, and suggests that the responses are related to the situation as it exists. It is likely that the strong sense of commitment to teacher training at University B is not favourable to future research plans on the part of its faculty members.

Another check on the general validity of the responses in Table II-67 was possible through the cross tabulation of research activities with future research plans, and this is shown in Table II-67 A.

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[8] See footnote, p. 164.

TABLE II-67 A

RESEARCH ACTIVITY RELATED TO PLANS FOR FUTURE RESEARCH IN NEXT TWO YEARS

RESEARCH ACTIVITY		PLANS FOR RESEARCH IN NEXT TWO YEARS	
Having done or currently doing research			
	YES	76%	$p < .001$
	NO	16%	
Ten hours or more per week on research			
	YES	80%	$p < .001$
	NO	46%	

The patterns shown in Table II-67 A are very significant. For example, 76 per cent of those who have done or are currently doing research plan more research in the next two years, while only 16 per cent of those not in this group are planning to do research. Also, 80 per cent of those who spend ten hours or more per week on research plan future research, whereas only 46 per cent of those who spend less than ten hours per week on research have such plans. Clearly, one way to increase research potential is to recruit those who have done research, and to encourage the current research activities of faculty members.

SUMMARY & CONCLUSIONS

In this final section of this Chapter, we will adhere to the following format: first, we shall attempt to summarize those characteristics of the three universities which make them somewhat different from each other; second, we shall present general conclusions which can be drawn from the information relating to the three universities, dealt with in this chapter, and presumably applicable to the six universities included in the study. The results of analyses of factors related to research activities will be interspersed throughout the chapter.

The descriptions of the three unidentified universities are presented to illustrate the fact that differences do exist in the patterns related to research.

University A

The overall impression that we get at University A is one of a high commitment to research activities. The mean rank is high at this university. By comparison to the other two universities, a higher proportion of its faculty usually teach summer school. Its faculty members work longer hours during the regular school year, and are more likely to teach summer school than elsewhere, at the same time devoting a higher proportion of their work time to research. This may result from the fact that a higher proportion of faculty members in University A perceive that they derive certain advantages from doing research than their counterparts at University C, and especially than those at University B, such as extra pay, assistance in attending professional conferences, and greater freedom in defining their job assignments. Another evidence of high commitment to research is an awareness on the part of the respondents that faculty resources are strained because of the smaller teaching loads assigned to researchers. This commitment and the cost it incurs is a matter of which respondents seem to be well aware; yet, at least one third of the respondents here feel that it should be possible for a faculty member heavily engaged in research to be free from teaching responsibilities. This is consistent with other facts: for example, more respondents at this university feel that, in making faculty appointments, the research graduate degree should be given preference over the professional graduate degree than at the other universities.

There are some indicators that the quality of research undertaken by respondents at this faculty is probably higher than that done elsewhere. For example, researchers here tend to use inferential statistics whereas those elsewhere are more likely by comparison to use a merely descriptive statistical kind of analysis; this suggests a more sophisticated level of research. Another indicator is that a higher proportion of researchers here than elsewhere have held more than one grant, suggesting greater depth of experience. In terms of the size of research projects, the fact that a higher proportion here than elsewhere requested large grants (over $10,000) and that a higher proportion indicated the need for specialized consultant services and personnel, suggests that large-scale work is being undertaken.

In summary, it appears that University A devotes the resources, has the qualified faculty with research experience, emphasizes research programs, and carries on sophisticated research more than the faculties of education in Universities B and C.

University B

By comparison to the Universities A and C, University B appears to have a major emphasis on professional preparation activities[9]; this emphasis works to the detriment of research activities. Among the indicators of this preoccupation with professional preparation is that over 80 per cent of the faculty hold teaching certificates, more than half have elementary teaching experience and three quarters have taught in secondary schools. Of the three larger universities, the smallest proportion of respondents at B apparently have research experience, and this is in spite of the fact that the sample of respondents from University B is biased in such a way that research-minded faculty members are over-represented in our sample. This suggests that the vast majority of faculty members at University B have been selected with their qualifications for teacher training in mind rather than their research abilities.

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[9] This takes the form of most of the faculty's resources being applied to teacher training at the undergraduate level, and to the preparation of professional specialists (i.e. administration, guidance, etc.) at the graduate level.

Teaching duties at University B are heavier than at the other two universities. By comparison to Universities A and C, more faculty members here are responsible for committee work, and duties other than research account for a larger proportion of their work week than elsewhere. It appears therefore that the situation here is less conducive to the conduct of research than at the other two universities.

In terms of their own perceptions, faculty members here are less likely than those at the other two universities to feel that there are advantages to be gained from doing research. In fact, more than half perceive no allowances of any kind for researchers; by comparison to University A, the resources here are not being strained on behalf of research activities.

In making faculty appointments, respondents at University B perceive that the emphasis between research and professional graduate degrees is about equal, and they feel that neither type of graduate degree should be given preference. It is not surprising therefore that respondents at B indicated theirs to be the least likely of the three universities to direct students into research graduate degrees.

In terms of desirable characteristics of candidates for faculty appointment, it is again clear that the members of this faculty have the lowest commitment to research of the three universities. They are almost exclusively in favour of appointing professors with training from a school of education and often with public school teaching experience in their field. With regard to the type of programs they feel that graduate students are being directed into, the professors at this university are more likely than others to state that the emphasis given to the research graduate program compared to the professional graduate program is sufficient or excessive.

With regard to the proportion of the faculty that should be involved in supervising student research, the opinions of respondents at University B tend to be divergent compared to those of respondents at the other two universities. Perhaps this implies a greater diversity of backgrounds and specializations of function at B than elsewhere. It may be that while every new professor recruited at Universities A and C is expected to do some research, the pattern at University B expects only some to have a serious commitment to research.

Respondents here are less likely than those at Universities A and C to agree that other departments or faculties should be involved in evaluating education students for the degree.

In terms of their own research activities, a smaller proportion here claim to have done any research at all than at the other universities. Compared to the others, only half the proportion at University B report research projects completed in the past. In addition, those who do carry out research projects are far less likely than similar respondents from Universities A and C to be spending ten hours or more per week on their research activities. Furthermore, this faculty has the smallest proportion of its respondents reporting plans for carrying out research in the next two years. Despite their higher degree of experience at the secondary school level they are less inclined to use secondary students as a major source of data for research purposes. This suggests that they do not tend to exploit their contacts in the schools for research activities. This smaller research activity at University B is consistent with the fact that when respondents at this university do request funds for research, they tend to ask for smaller sums than respondents at the other universities.

Not only are the respondents here less committed to the pursuit of research themselves, but about a third indicate that they are not interested in information about on-going research at the pre-publication stage. In addition to this, they are consistently below other respondents in the degree of their collaboration with others in research activities.

One further comparison: in our description of University A above, we intimated that the commitment of the university resources to educational research seems to be high. By contrast, the reverse appears to be true at University B where the availability of personnel to assist respondents in their research activities is in general the lowest of the three universities.

University C

While fairly clear patterns emerge for Universities A and B (research-oriented and teacher training-oriented, respectively), it is more difficult to arrive at a picture of any particular emphasis at University C. The position of this university seems to us to be intermediate in outlook between the extremes represented by the other two. For example, it is here that the highest proportion of the respondents feel that most faculty members should do some teaching and some research. Teaching duties are lightest at this university and a larger proportion here spend fifteen hours or more a week on research - their belief in a dual role seems to be reflected in their own activities. Further, 80 per cent of the respondents here devote less than five hours a week to the supervision of students. In contrast to the other universities, where about one third of the respondents find themselves eligible for sabbatical leave, here only one in ten considers himself eligible. If this in turn means a small number of years of service at this university, then it would follow that many of the respondents do not yet have the seniority to rise above the rank of lecturer.

If any characteristic pattern emerges, it is the one that we have mentioned of a dual role combined with heavier interaction with professional personnel at the university level (examination committees for thesis evaluation, assistance of out-of-faculty personnel in the selection of the professors, and other kinds of interchange) as well as a tendency to have more contact with personnel in the public school systems such as principals, teachers and pupils. Of the professors at the three universities, these are the most likely to have plans for research in the next two years.

UNIVERSITIES IN GENERAL

Definition of Research

No particular activity is considered by all respondents as being, or not being, educational research. Nevertheless, there are areas of considerable agreement; for example a large majority of respondents agree that the investigation of factors which affect the teaching-learning process in the classroom, the evaluation of the effectiveness of new curricula and methods, and general psychological studies of human learning and development should be part of the definition. Also, there is general agreement that the following three items do not legitimately constitute educational research: "presenting evidence to legislators of the need for greater support for the schools", "studying the educational research journals for lecture materials" and "disseminating new curricula methods of instruction or other school practices".

However, there are also areas of marked diversity of opinion; for example, about half the respondents believe that "designing new curricula and methods of instruction" is research whereas the other half believe it is not. Other areas where respondents are almost evenly split include: "analyzing the key concepts or philosophical assumptions underlying current educational issues" and "investigating factors which affect school administration".

Curriculum research is an area in which very little research is done by educators; however, educators tend to concur that curriculum research should be included in the definition of educational research. In fact, there is only one other item in the list more frequently agreed to than curriculum research, which is "investigating factors which affect the teaching-learning process in the classroom".

Academic Rank and Background

Over a third of the respondents in general hold the rank of Professor or Associate professor (37 per cent), and yet, respondents at these levels are doing less research than lower-ranking professors. It appears that rank is inversely related to research productivity. The vast majority of members of the faculties of education hold at least one undergraduate degree, but fewer than a third (29 per cent) have actually completed a Doctor's degree with thesis. If we add to this group those who are working towards a doctorate with thesis, we find that just over half (55 per cent) have any past or current commitment to training at this level. While we do not have the figures to compare this with members of other faculties, we feel that the proportion with doctorates is low; it has not been possible, however, to show any relationship between having completed the doctorate with thesis and research productivity. What this may mean is that academic training at the doctoral level is important in faculties of education neither in terms of obtaining an appointment, nor as a prelude to continuing research activities. We feel that it would be interesting to investigate further the reasons for the fact that those who hold doctorates are not more productive in research than those who do not.

About two thirds of all respondents are certified teachers. Further, a similar proportion have had experience teaching at the elementary or secondary levels. However, our analysis does not show those with teacher training or experience to be either more or less active in research than those without such training or experience. Thus our findings with Quebec data fail to replicate Sieber's finding of an inverse relationship between having teacher training and research productivity.

One of the ideas that we investigated was the possibility that work in a faculty of education might have been part of a career line going from teaching through administrative experience to a faculty position. However, since no more than eight per cent (elementary level) and 13 per cent (secondary level) of the respondents have had administrative experience in the school system, it appears that such experience can not be taken for granted in members of faculties of education. However, about a quarter of the respondents indicated that they had had administrative experience at the university or college level.

To obtain higher research productivity, it would seem reasonable to hire professors who have had a research background. Our analysis shows that only one per cent of the respondents have had more than ten years of experience in research, and fully 58 per cent have had no such experience whatever either prior to, or following their appointment to the faculties.

Current Activities

Research is very seldom the total activity of any member of a faculty of education and the extent of other responsibilities such as teaching, will undoubtedly be related to how much time can be devoted to research. For example, 58 per cent of all the respondents indicate that they spend more than ten hours a week in preparation of their teaching activities and 28 per cent spend more than ten hours a week on teaching. It seems therefore not surprising that in view of other possible activities, such as community service and administration, less than one respondent in three claim to be spending ten hours or more a week on research activities; half the respondents feel that too little time is being spent on research; these facts take on added interest in view of the statistically significant inverse relationship between time spent on teaching and time spent on research.

Because of the fact that many researchers find the summer months a productive time since they do not have classes to teach, we investigated the relationship between summer school teaching and research productivity. Although less than one respondent in ten is required to teach summer school, and although 55 per cent say that they usually teach summer school, we were unable to show any statistically significant relationship between summer school teaching activities and research productivity. In fact, the trend is in the direction opposite to that which we had predicted.

Attitudes Related to Research

Many students pursuing graduate degrees in education do so in order to up-date or expand their practical teaching skills and we have made a distinction between those following "professional degrees" programs, and those who are working towards academic graduate degrees. The latter are usually required to do some research resulting in a thesis whereas this is generally not true of the former. Seventy per cent of the respondents were in favour of a system of degrees which makes a distinction between professional degrees without thesis (M. Ed.s, Ed.D.s) and academic degrees with research requirements (M.A.s and Ph.D.s). The attitude toward this question is not related to whether or not the respondent does research.

A large majority of the respondents - over 70 per cent - feel that the number of graduate students in education planning research careers in the future is either insufficient or seriously insufficient, and those who are spending a major part of their work week on research are more likely to be critical.

A majority of respondents are of the opinion that the importance given to research in their faculty is less than in their university as a whole. They tend to feel that teaching should be combined with some research but they also feel that policies of their institutions are not as positive toward research as they themselves are. At the present time, the conduct of research does not appear to be a requirement for members of faculties of education and about half of the respondents reject the proposal that research should be a requirement for all faculty members.

We felt that those who do research might be more insistent than those who do not, that all other faculty members should be required to do research. But our analysis showed no statistically significant relationship between such an attitude and research activity. Despite this, those who spend a major portion of their work week on research, are more likely than other faculty members to be of the opinion that classroom teachers should be involved in the conception as well as in the conduct of educational research. On the whole, however, respondents feel that the conception and conduct of research rightfully belongs to teacher training professors, professional educational researchers, and behavioral scientists.

Factors Related to the Undertaking of Research

Undoubtedly, the background and training of researchers are important in terms of their competencies and research interest; in fact, two thirds of our respondents indicate that they generally rely on their training and ability as source of research problems.

Policies of the faculty and activities of the administration are also related. For example, many respondents indicate that if the number of summer school students were to increase, the research capabilities of the faculty would decrease correspondingly. With regard to administrators whom they feel should facilitate and actively encourage faculty research, their tendency is to perceive almost equally that administrators actually either leave research entirely to the researchers or do facilitate and actively encourage faculty research. While they do not want the administrators to direct research programs, it is apparent that they want more encouragement than they perceive they are receiving.

One way to encourage research is to provide for sabbatical leaves. Fewer than ten per cent of our respondents have ever applied for sabbatical leaves, and less than one in four feel that they are or have ever been eligible. There are indications of considerable confusion on the part of respondents vis-à-vis sabbatical policies. This is manifested by the fact that many do not know what these policies are and others, who feel they do, give various standards for the same institutions.

On the whole, respondents tend to agree that researchers obtain more prestige within their departments and more assistance from the university in attending professional conferences as a result of their research activity. In addition, respondents perceive that faculty members active in research obtain greater freedom in defining their own job assignments. In response to questions about advantages which accrue from research activity, there is always a larger per cent indicating that such advantages are enjoyed by others than by themselves. This may be an element of envy based on perception that other researchers obtain greater benefits as a result of the conduct of research than is true for oneself; conversely, it may be that many of the respondents who are not pursuing research themselves feel that those of their colleagues who are doing so, receive certain reward and incentives.

Encouragement of research activities may also come from sources outside of the faculty itself. For example, half of the respondents indicate that a priority list as well as the possibility of receiving some financial support, would influence their choice of research topics. However, the fact that few respondents cite the availability of funds as an influence on their research prior to responding to our questionnaire should not lead us to the conclusion that the availability of funds is unimportant in relationship to whether or not members of faculties of education carry out research. The lack of relationship in the past may simply have been the result of the unavailability of funds for educational research. This is borne out by our finding that the proportion of respondents having received funds in the two years prior to the receipt of our questionnaire was very small. Forty individuals at Universities A, B and C, had applied for funds in this time. Only about half of this number had actually received support. Fortunately, the proportion seems to be expanding. Although few applied for and actually received funds, a more substantial proportion indicate the existence of financial needs not being supported by grants. Grants are nevertheless related to research productivity. Of those who actually have held grants, 76 per cent have plans for research in the next two years, whereas this is true for only 53 per cent of those who have not. This difference is statistically significant.

The only major sources of funds to which Quebecers have tended to apply are Quebec-based. These include the I.R.E., the Quebec government and the Quebec universities. It would seem advisable for Quebec-based researchers to look further a field and to obtain their fair share of resources available from national and international, federal government and philanthropic granting organizations. Further, we must conclude that there is a major role to be played by an organization such as the I.R.E. in suggesting areas of research and providing information about sources of funds, and in the actual provision of funds for research.

There are apparently needs for research grants in education which are not being met, and while the patterns of amounts needed may differ by university, our analysis shows that those who have needs are in effect those who are actually doing the research. Hence, we feel justified in suggesting that more funds devoted to educational research would yield an increase in activity even giving the present researcher-resources in Quebec.

Kinds of Research Being Undertaken

Judging from the responses of the members of faculties of education, researchers in faculties of education emphasize about equally research undertaken to expand theory and research undertaken to improve practice. Faculty members usually work in areas in which they have contact and experience with the population they are studying; hence, they are most likely to draw their data from teachers, secondary school pupils and university students. Despite this tendency to draw data from familiar sources, the respondents generally prefer research in an academic rather than an educational problem area; they tend to prefer work in tests and measurement, educational administration, and psychology of learning to work in curriculum areas.

As to methods of obtaining data for research, respondents prefer to use experiments, questionnaires and existing records or data banks.

The major analytic style is statistical with a slight tendency to use descriptive rather than inferential statistics. This suggests a relatively low level of sophistication in educational research which may arise from either one or both of two factors: first, the educational training background of some faculty members may not enable them to use inferential statistics; second, because so little research has been done in education, it may be necessary at this time to lay the descriptive groundwork upon which inferential studies can later be based.

We have noted the tendency for educational researchers to prefer working on academic rather than professional areas in spite of their stated preference for the improvement of practice rather than the expansion of theory. There is very little interest expressed in the area of curriculum and this is equally true of those who have a teacher certificate and of those who do not. Faculty members would like to see more research undertaken in the areas of teacher training, school-community relations, talent and creativity of students, and teaching as a profession. Comparing present research to their statements of what kind of research would be desirable, we find little interest in expanding research in the curriculum area, and we are left wondering who will do curriculum research, if not professors of education.

Interaction and Attitudes towards Interaction

Respondents appear to be favourable to the involvement of other departments and faculties with graduate students in education, especially in providing them with a part of their training.

There is some degree of interaction with members of other faculties particularly in regard to teaching courses and participating in committees for the examination of theses, but there is a desire for more interaction. Well over half of the respondents indicate a desire for interdisciplinary committees or seminars concerned with scholarly issues, and 58 per cent of the respondents are in favour of visiting professors from other faculties of their universities to carry out research in education.

Attitudes toward interaction appear to fall short of any desire on the part of members of faculties of education to be under the control of members of other faculties. For example, only 17 per cent of the respondents agree with the participation of non-education professors in the selection of new members of the faculty of education.

Those who do research are more favourable towards interaction than those who do not. For example, they are significantly more likely than non-researchers to approve of non-faculty members on examination committees for theses, to be in favour of joint research appointments, and to agree with a policy of visiting professors for teaching. Further, those actually involved in research activity, are significantly more frequently involved in activities with members of other university departments than those not involved in research.

Less than half of the respondents have ever worked together with colleagues even in their own organizations, and only a quarter say that they have worked with researchers in other organizations. A majority of professors of education have not had contact with other educational personnel during the year for research purposes. It seems that that minority of professors of education who are active in research generally work alone.

The tendency for educational researchers not to involve themselves in direct interaction with other personnel may parallel the organizational isolation of faculties and departments of education.

There is very little sharing of research activities on the part of members of faculties of education with other researchers. This cannot be explained by difficulty in such collaboration, since a very tiny proportion of those who had worked with others in research encountered any problem with interchanges. Isolationism seems characteristic of both individuals and organizations in this field.

Problems Related to the Conduct of Research

We have already reported the fact that although educational researchers feel that certain advantages can result from the pursuit of research, a majority of our respondents perceive that the faculties of education put less emphasis on research than other faculties in universities. This is probably related to the fact that teacher preparation is an area of major responsibility and receives a great deal of time, attention, and resources. Thus, researchers are aware of problems related to a need for equipment, and the need for information about research, both on-going and completed. Also, many researchers note that there is a need for secretaries and typists. In fact, those faculty members who have obtained research grants tend to use the funds for secretarial and clerical assistance more than for any other category of personnel.

More than a third of the faculty members are unaware as to the existence or not of a research item in their faculty's budget. Despite this, there is no doubt that the greatest need felt by the largest proportion of respondents is for financial assistance. There are statistically significant relationships between the degree of research activity and the need for personnel to assist both in the clerical and technical aspects of conducting research; one area of very common need is guidance to sources of funds which would help to overcome these problems. Another important hindrance to the conduct of research appears to be a shortage of time but this is apparently considered to be an internal problem to be solved by the university.

Training of Researchers

No study of research productivity would be complete without an attempt to understand something about prospects for future research potential. A large part of this potential probably resides in those who are at present pursuing graduate degrees in education. But, this is true only of those whose graduate degrees are academically oriented and require research.

A majority of respondents feel that students should make their own choice as to whether they should undertake professional or research graduate degrees in education. However, 22 per cent indicate the belief that students should be directed into research graduate programs but only 12 per cent perceive that this is actually the case. Further, respondents feel that the emphasis given to the research graduate program is insufficient or greatly insufficient, both in the province and in their own faculties.

One of the characteristics that make faculties of education different from other faculties is that much of the graduate training is provided through summer school. But a majority feel that a graduate research degree achieved during the summer does not measure up in quality to one achieved during the regular academic year. This practice of offering courses during the summer may be detrimental to the development of doctoral programs. About half of all the respondents consider that the emphasis given in their school to the doctoral program by comparison to the Master's program is insufficient or greatly insufficient.

In summary, we must conclude that the fact that most graduate students in education are enrolled in part-time Master's programs not requiring research is unfortunate in view of our need to develop sophisticated researchers in education.

Research Activity

Even taking their own definitions without question, almost half of the respondents have never completed research projects, and only about one in seven have completed more than three research projects.

Only about two fifths of the respondents have research projects under way, indicating that a majority do not carry on research at a given time.

Research Plans

With regard to research plans, for the next two years, most of the respondents reply; a majority at Universities A and C (62 per cent and 85 per cent) reply affirmatively. However at University B, only 36 per cent indicate plans for research in the next two years.

Such a question about intentions for the future is almost certain to elicit positive responses. But the significant difference in response between Universities A and C on the one hand, and University B on the other, suggests that these responses must be taken seriously. Moreover, the positive association between planning for research and current research activities is statistically significant at the .001 level.

In concluding this summary, we must note that it seems to us that research activity on the part of members of faculties of education is low at present and even plans for research in the future are far from universal. This conclusion will lead us to suggestions for increased research, which will be presented at the end of this report.

APPENDICES

APPENDIX I-1

Q. 1.1 What is the total number of students now registered in your school department or faculty?

	UNIVERSITIES											
	A		B		C		D		E		F	
WITH THESIS	M	D	M	D	M[1]	D	M	D	M[2]	D	M	D
TAKING COURSES												
Full-time	22	8	6	9	43	14	0		17	NA	12	NA
Part-time	30	8	26	0	28	3	0		-	NA	23	NA
Summer	0	0	13	0	-	-	44	NA		NA	0	NA
T	52[3]	16	45	9	71	17	44	0	17		35	
NOT TAKING COURSES												
Full-time			0	2	-		0			NA	0	NA
Part-time			51	2	-		0			NA	0	NA
Summer			0	0	-		12	NA		NA	0	NA
T			51	4			12	0			0	
TOTALS	52	16	96	13	71	17	56	0				
WITHOUT THESIS												
TAKING COURSES												
Full-time			53	NA	25	NA		NA	20	NA	NA	NA
Part-time			143	NA	416	NA			657[4]	NA	NA	NA
Summer			24	NA	-	NA				NA	NA	NA
T			220	NA					677		0	
NOT TAKING COURSES												
Full-time			0	NA	-	NA		NA		NA	NA	NA
Part-time			55	NA	-	NA				NA	NA	NA
Summer			10	NA	-	NA				NA	NA	NA
T			65	NA							0	
TOTALS			285	NA	441	-					0	
GRANDS TOTALS	321	16	381	13	512	17	56	0	694		35	0

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[1] *Maîtrise en éducation*, only

[2] at E, M includes *M.Sc. Ed.* and *L. Péd.* with thesis

[3] should be added, those preparing a *Lic. Orient.* with thesis

[4] 657 = 524 at the university, 133 in other cities

APPENDIX I-2

Q. 2.4 Interchange between schools or departments of education and other divisions in the university are achieved in a variety of ways. Which of the following arrangements now exist with (1) academic departments, and (2) other professional schools in the university; and which would you like to see established?

		UNIVERSITIES					
		A	B	C	D	E	F
(a) Participation of non-education professors on examination committees for theses	Exists	✓	✓	✓	✓	✓	✓
	Desired					✓	✓
(b) Participation of non-education professors in the selection of the faculty of education	Exists	✓	✓	✓	✓		
	Desired					✓	
(c) Interdisciplinary committees or seminars which are concerned with scholarly issues	Exists	✓	✓	✓	✓	✓	✓
	Desired		✓			✓	
(d) Joint teaching appointments	Exists		✓			✓	
	Desired		✓	✓			✓
(e) Joint research appointments	Exists		✓	✓			
	Desired	✓	✓		✓	✓	✓
(f) Visiting professors from other faculties of your university for teaching	Exists	✓		✓	✓	✓	
	Desired		✓				✓
(g) Visiting professors from other faculties of your university for research	Exists	✓		✓	✓		
	Desired		✓	✓		✓	✓
(h) Other types of interchange	Exists		✓	✓			
	Desired		✓	✓		✓	

APPENDIX I-3

Q. 2.3 If an opening occurred for someone to teach a graduate course in each of the major fields listed below, which of the following persons would you prefer to hire?

	UNIVERSITIES					
PRESUMED OPENING IN	A	B	C	D	E	F
Educational Administration	2	2	2	5	3	2
Guidance and Counseling	*	1	2-4**	1	5	4
History of Education	4	1-2	4	4	2	4
Educational Sociology	4	2	4	2	4	4
Philosophy of Education	4	1	4	3	4	4
Child Development	4	1-2	4	3	2	2
Educational Psychology	4	1-2	4	2	1	2-4
Methods of Educational Research						
Comparative Education	2	2	4	2	2	2
Special Education	4	1-5	2-4	2	5	2
Curriculum and Methods of teaching in;						
Language Arts	2	2	4	1	3	2
Social Studies	2	2	4	1	3	2
Natural Sciences & Math	2	1-2	4	1	3	2-4
Vocational Education	2	1	5	1	5	4

* It is impossible to answer: Guidance is not always taught in the same school.

** Depending on local structures (at this university, guidance counselors are not trained at the Faculty of Education)

CODE

A professor trained in a school of education
- 1. who has mostly taught in the field.
- 2. who has mostly done research in the field.

A professor trained outside a school of education
- 3. who has mostly taught in a related field.
- 4. who has done research in a related field.

5. A school practitioner who has a great deal of experience in the field.
6. No particular preference.

APPENDIX I-4

Q. 3.10 In which of the following areas, if any, would you like to see more research undertaken in the graduate school or department of education? (Check as many as you wish.)

	UNIVERSITIES					
	A	B	C	D	E	F
School Finance		✓	✓	✓		
Educational Administration (other than finance)	✓	✓	✓	✓	✓	
Tests and Measurement	✓	✓	✓		✓	
Other Research Methodology	✓					✓
Guidance and Counseling		✓		✓		✓
Methods of Instruction	✓	✓	✓	✓	✓	
Talent, Creativity of students					✓	
Special Education	✓	✓	✓		✓	✓
Psychology of Learning	✓	✓				✓
Child Development	✓					✓
Adolescent Development	✓					✓
School-community Relations	✓			✓	✓	
Teacher Personality		✓	✓	✓	✓	✓
Teaching as a Profession				✓	✓	
History of Education		✓	✓			
Comparative Education			✓		✓	✓
Other						
Curriculum Research in:						
Mathematics	✓	✓	✓	✓		✓
Natural Sciences	✓	✓	✓	✓		
Social Studies	✓	✓	✓	✓		✓
Reading	✓	✓	✓		✓	
Foreign Languages	✓	✓	✓			
Other Language Arts	✓	✓	✓			
Business and Distributive Education						
Physical Education	✓	✓		✓	✓	
Other		✓		✓	✓	✓

APPENDIX I-5

INSTITUTE OF RESEARCH IN EDUCATION
October 1968

SURVEY ON EDUCATIONAL RESEARCH

QUESTIONNAIRE FOR DEANS

I INSTITUTIONAL DATA

Faculty or Department ________________________________ University

ABOUT STUDENTS

1.1 What is the total number of students now registered in your school, department or faculty?

	WITH THESIS		WITHOUT THESIS	
	Master	Dr	Master	Dr
Taking courses				
Full-time	___	___	___	___
Part-time	___	___	___	___
Summer only	___	___	___	___
Not taking courses				
Full-time	___	___	___	___
Part-time	___	___	___	___
Summer only	___	___	___	___

1.2 Please provide the following figures for new graduate students in education who will be required to do graduate thesis research, for the current academic year.

	Academic	Professional
Applied for admission to graduate school	___	___
Accepted for admission	___	___
Actually registered	___	___

1.3 a) Is either a teaching certificate or professional experience in the schools a formal requirement for admission to the academic graduate program? (Check the appropriate boxes)

Teaching certificate ____
Professional experience ____
Neither ____

b) If not, for the award of a degree? Why?

____
____
____

1.4 What steps do you take to ensure the quality of academic graduate students entering your school of education? (Master's and Doctor's)

1.5 About how many students are currently working on dissertations in the school or department of education?

Master ____
Doctor ____

bis About how many students have been hired this year as research assistants?

1.6 Of the total number of graduate degrees awarded by the university last year, approximately what percentage were received by students of education?

1.7 a) About how many students in education received the doctorate during the past academic year?

b) About how many students in education received the master's during the past academic year?

1.8 About what proportion of your graduate students are preparing themselves for the following careers

____ research

____ college administration

____ college teaching

____ public school administration

____ public school teaching

____ other (specify)

1.9 Please estimate the proportion of graduate recipients in the past three years whose first position after receiving the degree was in each of the following fields.

	Academic		Professional	
	Master	Dr	Master	Dr
In school systems				
No research	____	____	____	____
Some research	____	____	____	____
Only research	____	____	____	____
In colleges or universities				
No research	____	____	____	____
Some research	____	____	____	____
Only research	____	____	____	____
Elsewhere				
No research	____	____	____	____
Some research	____	____	____	____
Only research	____	____	____	____

1.10 About how many requests for graduates do you receive each year

for administrative jobs ____

for teaching jobs ____

for research jobs ____

1.11 a) Are any of the courses which are required for graduate students of education offered only in a department outside the school or department of education?

Yes ____ No ____

b) IF YES: Which departments?

1.12 About how many faculty members in the school or department of education are currently supervising dissertations?

	Master's	Doctor's
Individually	____	____
In committee	____	____
Full-time	____	____
Part-time	____	____

1.13 Are theses evaluated by

	Master's	Doctor's
a) members of your faculty only	____	____
b) faculty members of your university, other than your own faculty	____	____
c) experts outside of your own university	____	____

1.14 a) How many persons are teaching courses to graduate students in the school or department of education, either full-time or part-time?

Full-time ____ Part-time ____

b) How many graduate faculty members received their highest degree outside any school or faculty of education?

____

1.15 Are there any departments or similar divisions within the graduate school or department of education in which the majority of the faculty received most of their training for their highest degrees outside of any school or department of education?

Yes ____ No ____

IF YES: Which departments or divisions?

II RESEARCH AND OTHER GOALS OF THE GRADUATE PROGRAM

2.1 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?

(Check as many as you wish)

a) ____ Collecting statistics on school practices and educational outcomes, sometimes called "school status studies."

b) ____ Designing new curricula and method of instruction.

c) ____ Evaluating the effectiveness of new curricula and methods.

d) ____ Local school surveys (curriculum, financial, plant, etc.)

e) ____ Investigating factors which affect the teaching-learning process in the classroom.

f) ____ Disseminating new curricula, methods of instruction, or other school practices.

g) ____ Investigating factors which affect school administration.

h) ____ General psychological studies of human learning or development.

i) ____ Presenting evidence to legislators of the need for greater support for the schools.

j) ____ Developing new tests and measurements.

k) ____ Analyzing the key concepts or philosophical assumptions underlying current educational issues.

l) ____ Studying the educational research journals for lecture materials.

2.2 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research". (Write the appropriate letters in the spaces below in order of their importance)

1st ____
2nd ____
3rd ____

2.3 If an opening occurred for someone to teach a graduate course in each of the major fields listed below, which of the following persons would you prefer to hire?

Use this code to indicate the type of person.

A professor trained in a school of education

1) Who has mostly taught in the field

2) Who has mostly done research in the field

A professor trained outside a school of education

3) Who has mostly taught in a related field

4) Who has mostly done research in a related field

5) A school practitioner who has a great deal of experience in the field

6) No particular preference

Presumed opening in:

____ Educational Administration

____ Guidance and Counseling

____ History of Education

____ Educational Sociology

____ Philosophy of Education

____ Child Development

____ Educational Psychology

____ Methods of Educational Research

____ Comparative Education

____ Special Education

Curriculum and Methods of teaching in:

____ Language arts

____ Social studies

____ Natural sciences and mathematics

____ Vocational Education

2.4 Interchange between schools or departments of education and other divisions in the university are achieved in a variety of ways. Which of the following arrangements now exist with (1) academic departments, and (2) other professional schools in the university; and which would you like to see established?

	Now exist with:		Would like to see established with:	
	Acad. depts.	Profl. schools	Acad. depts.	Profl. schools
Participation of non-education professors on examination committees for theses	____	____	____	____
Participation of non-education professors in the selection of the faculty of education	____	____	____	____
Interdisciplinary committees or seminars which are concerned with scholarly issues	____	____	____	____
Joint teaching appointments	____	____	____	____
Joint research appointments	____	____	____	____
Visiting professors from other faculties of your universities for teaching	____	____	____	____
Visiting professors from other faculties of your universities for research	____	____	____	____
Other types of interchange (Which?)				
____________________	____	____	____	____

____

2.5 In general, how fruitful have interchanges been with the academic departments in the university; what problems have been encountered, if any; and what directions would you like future interchange to take?

III ARRANGEMENTS FOR RESEARCH AND SERVICE

We hope later with your permission to distribute questionnaires to members of your faculty. In this interview we are mainly concerned with the overall research program and its administrative arrangements.

3.1 To the best of your knowledge, how many faculty members in your faculty or department are presently providing field services to local school systems (i.e. school survey, consultation, test scoring or administration, or workshop and inservice courses)? Doing research?

	F.S.	Pes.
Is it a major part of their activity?	____	____
How many would you like to be providing field services?	____	____
doing research?	____	____

3.2 Are faculty members encouraged to do research

a) through smaller teaching load during the academic year ____

b) through exemption from committees, practice teaching, administrative or similar duties ____

c) through extra pay for research during summer

3.3 For any of the arrangements above, how many members are involved and for what proportion of time?

	No.	% time
a) smaller teaching load	____	____
b) exemption from committee and other tasks	____	____
c) pay for summer research	____	____

3.4 How seriously have the teaching resources of the graduate school or department of education been strained by allowing a smaller teaching load for individuals doing research?

Very seriously ____ Fairly seriously ____
Only a little ____ Not at all ____

3.5 It is sometimes said that teaching commitments seriously interfere with a professor's research efforts. On the other hand, it is argued that a researcher should also teach so that students will benefit from his research work. How do you personally feel about this issue, and how is it handled in your institution?

3.6 To the best of your knowledge, about what proportion of the faculty in the graduate school or department who have taken sabbaticals in the past five years have conducted research while on leave?

______________ %

3.7 At the end of the sabbatical, does the administration review the research which was conducted while on leave?

____ Always ____ Frequently ____ Sometimes
____ Rarely ____ Never

3.8 Are leaves of absence without pay given to qualified faculty members in the graduate school or department who wish to do research?

____ Yes ____ No ____ Depends (on what?)

3.9 If YES or DEPENDS: About how many faculty members have taken such leaves in the past five years?

____
No.

3.10 In which of the following areas, if any, would you like to see more research undertaken in the graduate school or department of education? (Check as many as you wish)

____ School finance
____ Educational administration (other than finance)
____ Tests and measurements
____ Other research methodology
____ Guidance and counseling
____ Methods of instruction
____ Talent, creativity of students
____ Special education
____ Psychology of learning
____ Child development
____ Adolescent development
____ School-community relations
____ Teacher personality
____ Teaching as a profession
____ History of Education
____ Comparative education
____ Other (specify) ________________________________

CURRICULUM RESEARCH IN:

____ Mathematics
____ Natural sciences
____ Social studies
____ Reading
____ Foreign languages
____ Other language arts
____ Business and distributive education
____ Physical education
____ Other (what?) ________________________________
____

3.11 Please go back over the list and double-check those topics where you mainly had higher education in mind.

3.12 Administrators at the school or departmental level may become involved in the research of faculty members in several ways, and the amount of involvement may vary greatly from school to school. Which of the following statements best expresses your own view of the appropriate role for administrators regarding faculty research; and which best expresses the view of most of the faculty.

	Your own view (check one)	Faculty's view (check one)
a) Administrators should facilitate, actively encourage, and direct the faculty research program	____	____
b) Administrators should facilitate and actively encourage faculty research, but should leave direction to the faculty	____	____
c) Administrators should only facilitate faculty research	____	____

3.13 Which of the above alternatives best describes the present role of the administration in the graduate school or department of education? (Write the appropriate letter a, b, or c below.)

____
letter

3.13.1 Is there a "research" item on your faculty's budget? ____________

3.14 If your graduate school or department of education were to receive about $200 000 for facilitating or conducting educational studies, or for preparing researchers, how would you like to see these funds used?

3.15 What structural arrangements exist in your faculty for research?

3.16 How many faculty members are associated with any research bureau (Center, Institute, Office, or Lab School for research)?

3.17 Would you like more faculty members to become associated with any research bureau which might exist?

Yes ____ No ____

Depends (on what?) ______________________________

3.18 Do you personally feel that a research bureau should primarily:

1 ____ Facilitate the research of non-bureau faculty

2 ____ Facilitate the research of individuals on the bureau staff

3 ____ Pursue a program of research which has been formulated by the bureau as a unit

IF THERE IS NOT AN EDUCATIONAL RESEARCH BUREAU (Center, Institute, Office, or Lab School for research)

3.19 Why is there no educational research bureau in your institution?

3.20 Are there any plans for founding such a bureau in the future?

Yes ____ No ____

If so, when is the bureau planned, what activities will it undertake, and how will it be asministered?

IV GENERAL EDUCATIONAL OPINIONS AND PROBLEMS OF EDUCATIONAL RESEARCH

(This section was not used during the interviews)

V PERSONAL INFORMATION

5.1 Have you ever been employed by a school system?

1 ____ Yes 2 ____ No

5.2 If Yes: What position(s) and for how long?

____ (position) ____________ (no. of years)

5.3 Aside from the work on your dissertation, what has been the longest period of time during which research was your primary activity?

1 ____ At no time was research my primary activity

2 ____ 1 to 6 months

3 ____ 7 to 12 months

4 ____ 13 to 24 months

5 ____ More than 24 months

5.4 If research was ever your primary activity: When was this and what did you do?

5.5 Have you ever been a staff member of a research organization?

1 ____ Yes 2 ____ No

5.6 If Yes: What was the title of the organization; and when were you a staff member?

5.7 Are you currently engaged in research?

1 ____ Yes 2 ____ No

5.8 If Yes: Would you briefly describe it?

5.9 Have you ever taught a course in the methods of educational research?

1 ____ Yes 2 ____ No

5.10 If Yes: What was the course(s)?

5.11 What was your last position before becoming dean or department head?

______________________________ (Position) ______________________________ (Location)

5.12 In which professional associations are you most active?

5.13 Do you have at present any specific plans for increasing the research activities of your faculty?

Do you hope to hire any personnel within the next 12 months who will make a significant contribution to your research activities?

5.14 Among other things, IRE has been established to facilitate educational research in the province of Quebec.

In your opinion, in which ways could IRE contribute substantially to educational research?

5.15 What do you think of the IRE's activity up to now? What do your faculty think?

APPENDIX II-1

Q. 4 Give a complete list of your DEGREES below.

DOCTORATE WITH THESIS OBTAINED AT	UNIVERSITIES A N	UNIVERSITIES B N	UNIVERSITIES C N	TOTAL N
LAVAL				
Completed	1	0	2	3
Lacking only thesis	1	0	1	2
Course work in progress	1	0	0	1
McGILL				
Completed	0	0	0	0
Lacking only thesis	0	2	0	2
Course work in progress	0	0	0	0
MONTREAL				
Completed	1	0	3	4
Lacking only thesis	2	0	6	8
Course work in progress	0	0	0	0
CANADA				
Completed	0	2	4	6
Lacking only thesis	0	2	3	5
Course work in progress	0	0	1	1
U.S.				
Completed	1	10	3	14
Lacking only thesis	3	1	1	5
Course work in progress	0	0	0	0
EUROPE				
Completed	4	3	6	13
Lacking only thesis	4	1	3	8
Course work in progress	0	2	2	4
Number of Respondents	42	58	39	139

TOTAL	A N	A %	B N	B %	C N	C %	TOTAL N	TOTAL %
Completed	7	17	15	26	18	46	40	29
Lacking only thesis	10	24	6	10	14	36	30	22
Course work in progress	1	2	2	3	3	8	6	4
No progress towards doctorate	24	57	35	60	4	10	63	45

APPENDIX II-2

Q. 6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

TEACHING	UNIVERSITIES							
	A		B		C		TOTAL	
Experience in years	N	%	N	%	N	%	N	%
ELEMENTARY								
1	6	14	4	7	2	5	12	9
2	2	5	6	10	5	13	13	9
3 - 5	3	7	11	19	3	8	17	12
6 - 10	2	5	9	16	3	8	14	10
over 10	1	2	3	5	0	0	4	3
None	28	68	25	43	26	67	79	57
SECONDARY								
1	4	10	3	5	3	8	10	7
2	6	15	7	12	2	5	15	11
3 - 5	8	20	14	24	11	28	33	24
6 - 10	5	12	15	26	5	13	25	18
over 10	0	0	7	12	1	3	8	6
None	19	45	12	21	17	44	48	35
CEGEP & POST-SECONDARY								
1	4	10	0	0	1	3	5	4
2	2	5	1	2	10	26	13	9
3 - 5	5	12	1	2	4	10	10	7
6 - 10	2	5	1	2	4	10	7	5
over 10	2	5	0	0	5	13	7	5
None	27	64	55	95	15	39	97	70
UNIVERSITY & COLLEGE								
1	3	7	2	3	5	13	10	7
2	13	31	9	16	8	21	30	22
3 - 5	10	24	16	28	7	18	33	24
6 - 10	6	14	14	24	5	13	25	18
over 10	4	10	9	16	4	10	17	12
None	6	14	8	14	10	26	24	17
Number of Respondents	42		58		39		139	

APPENDIX II-3

Q. 6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

ADMINISTRATION	UNIVERSITIES						TOTAL	
	A		B		C			
Experience in years	N	%	N	%	N	%	N	%
ELEMENTARY								
1	1	2	0	0	0	0	1	1
2	0	0	2	3	0	0	2	1
3 - 5	2	5	2	3	1	3	5	4
6 - 10	0	0	0	0	1	3	1	1
over 10	0	0	2	3	0	0	2	1
None	39	93	52	90	37	94	128	92
SECONDARY								
1	0	0	0	0	2	5	2	1
2	0	0	1	2	4	10	5	14
3 - 5	4	10	2	3	1	3	7	5
6 - 10	0	0	1	2	3	8	4	3
over 10	0	0	0	0	0	0	0	0
None	38	90	54	93	29	74	121	87
CEGEP & POST-SECONDARY								
1	1	2	0	0	1	3	2	1
2	0	0	0	0	4	10	4	3
3 - 5	0	0	0	0	4	10	4	3
6 - 10	2	5	0	0	0	0	2	1
over 10	0	0	0	0	1	3	1	1
None	39	93	58	100	29	94	126	91
UNIVERSITY & COLLEGE								
1	4	10	3	5	2	5	9	7
2	4	10	2	3	3	8	9	7
3 - 5	3	7	2	3	4	10	9	7
6 - 10	1	2	2	3	0	0	3	2
over 10	0	0	2	3	2	5	4	3
None	30	71	47	81	28	72	105	76
Number of Respondents	42		58		39		139	

APPENDIX II-4

Q. 32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

CODE

A professor trained in a school of education -
1. who has mostly taught in the field.
2. who has mostly done research in the field.

A professor trained outside a school of education -
3. who has mostly taught in a related field.
4. who has mostly done research in a related field.

5. A school practitioner who has a great deal of experience in the field.

6. No particular preference.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
EDUCATIONAL ADMINISTRATION								
1	8	19	15	26	2	5	25	18
2	7	17	9	16	9	23	25	18
3	3	7	2	3	0	0	5	4
4	3	7	2	3	1	3	6	4
5	8	19	9	16	15	38	32	23
6	2	5	3	5	1	3	6	4
Total	31	76	40	69	28	72	99	71
EDUCATIONAL SOCIOLOGY								
1	4	10	14	24	3	8	21	15
2	12	29	13	22	12	31	37	27
3	3	7	3	5	4	10	10	7
4	12	29	7	12	6	15	25	18
5	1	2	3	5	2	5	6	4
6	0	0	2	3	0	0	2	1
Total	32	78	42	72	27	69	101	73
GUIDANCE & COUNSELING								
1	5	12	11	19	3	8	19	14
2	10	24	10	17	11	28	31	22
3	2	5	4	7	2	5	8	6
4	0	0	2	3	0	0	2	1
5	11	26	8	14	12	31	31	22
6	4	10	4	7	0	0	8	6
Total	32	78	39	67	28	72	99	71

APPENDIX II-4

Q. 32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PHILOSOPHY OF EDUCATION								
1	12	29	19	33	10	26	41	29
2	5	12	11	19	8	21	24	17
3	4	10	6	10	2	5	12	9
4	5	12	3	5	6	15	14	10
5	0	0	1	2	0	0	1	1
6	4	10	2	3	0	0	6	4
Total	30	71	42	72	26	67	98	71
HISTORY OF EDUCATION								
1	16	38	16	28	9	23	41	29
2	10	24	15	26	17	44	42	30
3	1	2	4	7	0	0	5	4
4	2	5	4	7	1	3	7	5
5	0	0	0	0	0	0	0	0
6	3	7	3	5	1	3	7	5
Total	32	76	42	72	27	69	101	73
CHILD DEVELOPMENT								
1	2	5	11	19	3	8	16	12
2	19	45	16	28	12	31	47	34
3	3	7	4	7	1	3	8	6
4	10	24	3	5	5	13	18	13
5	2	5	6	10	8	21	16	12
6	0	0	2	3	0	0	2	1
Total	36	86	42	72	29	74	107	77
EDUCATIONAL PSYCHOLOGY								
1	4	10	9	16	6	15	19	14
2	13	31	18	31	14	36	45	32
3	4	10	6	10	1	3	11	8
4	7	17	4	7	5	13	16	12
5	1	2	4	7	3	8	8	6
6	1	2	1	2	0	0	2	1
Total	30	71	42	72	29	74	101	73

APPENDIX II-4

Q. 32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
METHODS OF EDUCATIONAL RESEARCH								
1	0	0	4	7	1	3	5	4
2	26	62	32	55	24	62	82	59
3	1	2	1	2	1	3	3	2
4	1	2	5	9	1	3	7	5
5	6	14	0	0	3	8	9	6
6	0	0	2	3	0	0	2	1
Total	34	81	44	76	30	77	108	78
COMPARATIVE EDUCATION								
1	6	14	14	24	4	10	24	17
2	17	40	20	34	21	54	58	42
3	2	5	1	2	0	0	3	2
4	3	7	4	7	2	5	9	6
5	3	7	0	0	1	3	4	3
6	0	0	3	5	0	0	3	2
Total	31	74	42	72	28	72	101	73
SPECIAL EDUCATION								
1	4	10	12	21	3	8	19	14
2	13	31	16	28	7	18	36	26
3	3	7	1	2	1	3	5	4
4	1	2	0	0	1	3	2	1
5	11	26	8	14	15	38	34	24
6	2	5	2	3	2	5	6	4
Total	34	81	39	67	29	74	102	73
LANGUAGE ARTS								
1	7	17	23	40	11	28	41	29
2	8	19	3	5	5	13	16	12
3	8	19	2	3	3	8	13	9
4	7	17	0	0	4	10	11	8
5	0	0	10	17	5	13	15	11
6	1	2	5	9	0	0	6	4
Total	31	74	43	74	28	72	102	73

APPENDIX II-4

Q. 32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
SOCIAL STUDIES								
1	4	10	22	38	10	26	36	26
2	10	24	3	5	5	13	18	13
3	5	12	3	5	3	8	11	8
4	10	24	2	3	3	8	15	11
5	1	2	8	14	7	18	16	12
6	1	2	4	7	1	3	6	4
Total	31	74	42	72	29	74	102	73
NATURAL SCIENCES & MATHEMATICS								
1	7	17	23	40	9	23	39	28
2	7	17	3	5	4	10	14	10
3	6	14	3	5	4	10	13	9
4	9	21	1	2	4	10	14	10
5	2	5	8	14	7	18	17	12
6	1	2	4	7	0	0	5	4
Total	32	76	42	72	28	72	102	73
VOCATIONAL EDUCATION								
1	3	7	16	28	3	8	22	16
2	6	14	3	5	6	15	15	11
3	1	2	3	5	0	0	4	3
4	2	5	2	3	0	0	4	3
5	14	33	14	24	16	41	44	32
6	3	7	4	7	1	3	8	6
Total	29	69	42	72	26	67	97	70

APPENDIX II-5

Q. 7 What are the MAJOR JOB AREAS in your present appointment, and how many hours per week of your time are devoted to each?

ACTIVITIES Hours per week	UNIVERSITIES A N	%	B N	%	C N	%	TOTAL N	%
PREPARATION FOR TEACHING								
None	3	7	4	7	3	8	10	7
1-4	6	14	6	10	6	15	18	13
5-9	8	19	11	19	12	31	31	23
10-14	11	26	22	38	5	13	38	27
15	14	33	15	26	13	33	42	30
TEACHING								
None	4	10	1	2	3	8	8	6
1-4	13	31	3	5	18	46	34	25
5-9	20	48	21	36	17	44	58	42
10-14	4	10	30	52	0	0	34	25
15	1	2	3	5	1	3	5	4
RESEARCH								
None	11	26	32	55	12	31	55	40
1-4	6	14	6	10	4	10	16	11
5-9	6	14	12	21	8	21	26	19
10-14	6	14	4	7	6	15	16	11
15	13	31	4	7	9	23	26	19
SUPERVISING STUDENTS								
None	16	38	10	17	16	41	42	30
1-4	5	12	19	33	15	39	39	28
5-9	14	33	17	29	3	8	34	25
10-14	3	7	7	12	3	8	13	9
15	4	10	5	9	2	5	11	8
ADMINISTRATION								
None	23	55	27	47	23	59	73	53
1-4	2	5	13	22	6	15	21	15
5-9	3	7	5	9	2	5	10	7
10-14	4	10	3	5	3	8	10	7
15	10	24	10	17	5	13	25	18
COMMITTEE WORK								
None	15	36	12	21	17	44	44	32
1-4	11	26	28	48	11	28	50	36
5-9	7	17	14	24	4	10	25	18
10-14	7	17	4	7	5	13	16	12
15	2	5	0	0	2	5	4	3
CONSULTATION SCHOOL SYSTEM								
None	37	88	42	72	33	85	112	81
1-4	5	12	12	21	5	13	22	16
5-9	0	0	3	5	1	3	4	3
10-14	0	0	1	2	0	0	1	1
15	0	0	0	0	0	0	0	0

APPENDIX II-5 (cont'd)

Q. 7 What are the MAJOR JOB AREAS in your present appointment, and how many hours per week of your time are devoted to each?

ACTIVITIES	UNIVERSITIES							
	A		B		C		TOTAL	
Hours per week	N	%	N	%	N	%	N	%
CONSULTATION GOVERNMENT								
None	39	93	55	95	34	87	128	92
1-4	3	7	1	2	4	10	8	6
5-9	0	0	2	3	0	0	2	1
10-14	0	0	0	0	0	0	0	0
15	0	0	0	0	1	3	1	1
EXTENSION WORK								
None	40	95	51	88	34	87	125	90
1-4	0	0	7	12	3	8	10	7
5-9	2	5	0	0	1	3	3	2
10-14	0	0	0	0	1	3	1	1
15	0	0	0	0	0	0	0	0
Number of Respondents	42		58		39		139	

APPENDIX II-6

Q. 27 Are you in favour, for your school, of a system of graduate degrees in education which reflects the distinction between the two types of training defined above?

YES 52

Without condition 40

"Both are essential"

"Research and practice require different programs of training"

"Distinction takes different interests and aptitudes into account"

Provided 12

- a very high professional level be demanded from the candidate
- the difference between Ph.D. and Ed.D. be well defined
- at the M's level, "original research" and "thesis" be modified quantitatively
- the professional degree include a minimum of training to data gathering and action research
- the so-called superiority of the Ph.D. be demythified
- theses be different for the future researcher and for the future practitioner

NO 17

"All degrees should require research"	10
"Both kinds of training - practice and research - are necessary and complementary"	3
"I prefer research degrees, as I believe that this training is valuable"	1
Without comments	3

Yes, at the Master's level, but research degree only at the doctoral level	3
Cannot decide	4

APPENDIX II-7

Q. 64 Comment on the availability of bibliographic resources relevant to your research work.

LOCALLY AVAILABLE	UNIVERSITIES							
	A		B		C		T	
	N	%	N	%	N	%	N	%
CURRENT PERIODICALS								
Excellent	6	14	3	5	9	23	18	13
Adequate	20	48	24	41	15	38	59	42
Poor	8	19	6	10	8	21	22	16
Total	34	81	33	57	32	82	99	71
BOUND PERIODICALS								
Excellent	6	14	2	3	4	10	12	9
Adequate	16	38	19	33	19	49	54	39
Poor	11	26	10	17	8	21	29	21
Total	33	79	31	53	31	80	95	68
RESEARCH REPORTS (FINAL)								
Excellent	2	5	0	0	1	3	3	2
Adequate	10	24	14	24	5	13	29	21
Poor	17	40	12	21	19	49	48	35
Total	29	69	26	45	25	64	80	58
ONGOING RESEARCH (PRE-PUBLICATION)								
Excellent	2	5	0	0	1	3	3	2
Adequate	2	5	6	10	3	8	11	8
Poor	19	45	18	31	19	49	56	40
Total	23	55	24	41	23	59	70	50
ABSTRACTS								
Excellent	3	7	3	5	2	5	8	6
Adequate	6	14	12	21	5	13	23	17
Poor	15	36	11	19	16	41	42	30
Total	24	57	26	45	23	59	73	53
MICROFICHES								
Excellent	1	2	1	2	1	3	3	2
Adequate	15	36	9	16	3	8	27	19
Poor	10	24	12	21	20	51	42	30
Total	26	62	22	38	24	62	72	52
MICROFILMS								
Excellent	1	2	1	2	1	3	3	2
Adequate	12	29	13	22	4	10	29	21
Poor	13	31	10	17	21	54	44	32
Total	26	62	24	41	26	62	76	55

APPENDIX II-8

Q. 64 Comment on the availability of bibliographic resources relevant to your research work.

OUTSIDE SOURCES	UNIVERSITIES							
	A		B		C		T	
	N	%	N	%	N	%	N	%
CURRENT PERIODICALS								
Excellent	7	17	4	7	5	13	16	12
Adequate	13	31	15	26	6	15	34	24
Poor	4	10	3	5	9	23	16	12
Total	24	57	22	38	20	51	66	48
BOUND PERIODICALS								
Excellent	6	14	3	5	5	13	14	10
Adequate	12	29	13	22	4	10	29	21
Poor	6	14	4	7	9	23	19	14
Total	24	57	20	35	18	46	62	45
RESEARCH REPORTS (FINAL)								
Excellent	4	10	2	3	2	5	8	6
Adequate	10	24	13	22	5	13	28	20
Poor	7	17	5	9	7	18	19	14
Total	21	43	20	30	14	23	55	32
ONGOING RESEARCH (PRE-PUBLICATION)								
Excellent	3	7	2	3	0	0	5	4
Adequate	8	19	7	12	3	8	18	13
Poor	8	19	8	14	8	21	24	17
Total	19	45	17	29	11	28	47	34
ABSTRACTS								
Excellent	2	5	3	5	0	0	5	4
Adequate	8	19	13	22	6	15	27	19
Poor	8	19	3	5	6	15	17	12
Total	18	43	19	33	12	31	49	35
MICROFICHES								
Excellent	3	7	2	3	1	3	6	4
Adequate	8	19	10	17	7	18	25	18
Poor	4	10	5	9	7	18	16	12
Total	15	36	17	29	15	39	47	34
MICROFILMS								
Excellent	2	5	2	3	4	10	8	6
Adequate	11	26	11	19	5	13	27	19
Poor	3	7	6	10	7	18	16	12
Total	16	38	19	33	16	41	51	37

APPENDIX II-9

Q. 66 What specialized consultant services and personnel are available to you in your role as researcher?

SERVICES & PERSONNEL Availability	UNIVERSITIES A N	 B N	 C N	TOTAL N
INFORMATION RETRIEVAL				
Not available	2	9	7	18
Available	11	9	11	31
DOCUMENTATION				
Not available	1	6	4	11
Available	21	10	23	54
DATA BANK				
Not available	7	9	10	26
Available	3	4	6	13
CENSUS-TYPE DATA				
Not available	4	7	6	17
Available	10	4	16	30
STATISTICS ADVISER				
Not available	1	6	1	8
Available	20	15	26	61
RESEARCH DESIGN CONSULTANT				
Not available	3	6	5	14
Available	13	14	12	39
COMPUTER SERVICES				
Not available	1	1	2	4
Available	21	22	22	65

APPENDIX II-10

Q. 69 Indicate the personnel available to you in your role as researcher.

PERSONNEL	UNIVERSITIES			
	A	B	C	TOTAL
Availability	N	N	N	N
SECRETARY				
Not available	11	21	10	42
Available	15	5	17	37
TYPIST				
Not available	7	17	10	34
Available	21	12	18	51
GENERAL CLERICAL				
Not available	5	19	9	33
Available	4	6	6	16
TRANSLATOR				
Not available	8	16	9	33
Available	4	2	7	13
COMPUTER PROGRAMMERS				
Not available	1	9	1	11
Available	18	11	18	47
NON-STUDENT RESEARCH ASSISTANTS				
Not available	7	15	11	33
Available	12	3	9	24
STUDENT RESEARCH ASSISTANTS				
Not available	7	11	6	24
Available	17	10	20	47
GUIDANCE TO SOURCES OF FUNDS				
Not available	12	7	15	34
Available	5	14	3	22
TECHNICIANS				
Not available	7	11	5	23
Available	10	3	12	25

APPENDIX II-11

INSTITUTE OF RESEARCH IN EDUCATION
Department of Education
QUEBEC

INVENTORY OF RESEARCH IN EDUCATION IN QUEBEC

QUESTIONNAIRE FOR MEMBERS OF FACULTIES AND DEPARTMENTS OF EDUCATION

January 1969

1 NAME ______________________ FIRST NAME ______________________ ( ) 01-03
(In capitals, please)
SEX M ___ 1 F ___ 2 04

2 Check the name of the university that employs you. 05

Bishop's University ___ 1
Laval University ___ 2
McGill University ___ 3
University of Montreal ___ 4
University of Sherbrooke ___ 5
Sir George Williams University ___ 6

3 TITLE (Check the one that applies) 06

Professor ___ 1
Associate Professor ___ 2
Assistant Professor ___ 3
Lecturer ___ 4
Research Director ___ 5
Other (specify) ___________ ___ 6

4 Give a complete list of your DEGREES below.
(Teaching Licenses or Certificates will be entered later.)

	FIELD	COLLEGE OR UNIVERSITY	YEAR	
Undergraduate degrees				
______ (specify)	______	______	___	
______	______	______	___	( ) 07
______	______	______	___	
Other Degrees With No Thesis Requirement				
Licence (French)(No.of credits___)				
Completed	______	______	___	( ) 08
Course work in progress	______	______	___	( ) 09
Master				
Completed	______	______	___	( ) 10
Course work in progress	______	______	___	( ) 11
Doctorate				
Completed	______	______	___	( ) 12
Course work in progress	______	______	___	( ) 13
Other Degrees Requiring Thesis				
Licence (French)(No.of credits___)				
Completed	______	______	___	( ) 14
Lacking only thesis	______	______	___	( ) 15
Course work in progress	______	______	___	( ) 16
Master				
Completed	______	______	___	( ) 17
Lacking only thesis	______	______	___	( ) 18
Course work in progress	______	______	___	( ) 19
Doctorate				
Completed	______	______	___	( ) 20
Lacking only thesis	______	______	___	( ) 21
Course work in progress	______	______	___	( ) 22
Other (describe)				( ) 23
______	______	______	___	
______	______	______	___	
______	______	______	___	

Write in the names of your ______________________

principal thesis advisers, if any. ______________________

5 PROFESSIONAL TEACHER TRAINING other than reported in 4 above.
(Omit date of Certificate if you took training but did not receive Certificate.)

Name of Certificate	Date of Certificate	Name of Institution or Organization	Province or State	
______	______	______	______	( ) 24
______	______	______	______	
______	______	______	______	

6 Count as one year of EXPERIENCE an academic year when you devoted more than half of your time to the following activities.

		No. of years	
Teaching	elementary	______	25 - 26
	secondary	______	27 - 28
	CEGEP & Post-secondary	______	29 - 30
	University & College	______	31 - 32
Administration	elementary	______	33 - 34
	secondary	______	35 - 36
	CEGEP & Post-secondary	______	37 - 38
	University & College	______	39 - 40
Research	______ area or field	______	41 - 42
	______	______	43 - 44
	______	______	45 - 46
Industrial & Professional	______ nature of work	______	47 - 48
	______	______	49 - 50
Other (specify)	______	______	51 - 52

7 What are the MAJOR JOB AREAS in your present appointment, and how many hours per week of your time are devoted to each? (Do not include summer school.)

8 Possibly the amount of time that you spend on these activities is not ideal. Indicate how closely, in your view, your time allotment fits the ideal situation.

	Actual time spent	Too little 1	About right 2	Too much 3	
Preparation for teaching	____	____	____	____	53 - 55
Teaching	____	____	____	____	56 - 58
Research	____	____	____	____	59 - 61
Supervising students	____	____	____	____	62 - 64
Administration	____	____	____	____	65 - 67
Committee work	____	____	____	____	68 - 70
Consultation					
a) school system	____	____	____	____	71 - 73
b) business & industry	____	____	____	____	74 - 76
c) government	____	____	____	____	05 - 07
Extension work	____	____	____	____	08 - 10
Other____________ (specify	____	____	____	____	11 - 13
Total hours ____________					14 - 16

9 Do you usually teach summer school at your university? YES____ NO____ 17

10 If no, what professional activity do you generally undertake during the summer? ( ) 18

____

____

____

11 Does your appointment commit you to teaching summer school at your university? YES____ NO____ 19

12 If yes, do you receive additional salary for that work? YES____ NO____ 20

13 Are you associated with any research bureau (Center, Institute, Office, or Lab School for research)? YES___ NO___ 21

Describe nature of association ______________________

____

14 As a result of doing research, is it your impression that you have gained in any of the following areas, and do you feel that any of your colleagues have achieved such advantages as a result of doing research? (Check all that apply.)

	YOURSELF		COLLEAGUES		
	YES	NO	YES	NO	
a) Smaller teaching load during the academic year	___	___	___	___	22 - 23
b) Exemption from committees, practice teaching supervision, administrative or similar duties	___	___	___	___	24 - 25
c) Extra pay for research during summer					26 - 27
d) Faster promotion	___	___	___	___	28 - 29
e) More prestige within the department	___	___	___	___	30 - 31
f) A greater voice in departmental decision-making	___	___	___	___	32 - 33
g) Greater financial support	___	___	___	___	34 - 35
h) Assistance in attending professional conferences	___	___	___	___	36 - 37
i) Greater freedom in defining your job assignments	___	___	___	___	38 - 39
j) Others ______________________ (specify)	___	___	___	___	40 - 41
______________________	___	___	___	___	42 - 43

15 If smaller teaching loads are allowed for individuals doing research, how seriously have the teaching resources of the graduate school or department of education been strained by so doing?

NOT ALLOWED ___ 1 44

VERY SERIOUSLY ___ 2 FAIRLY SERIOUSLY ___ 3 ONLY A LITTLE ___ 4 NOT AT ALL ___ 5

16 Which of the following best represents 1) your personal opinion, 2) the policy of your institution, and 3) the attitude of your colleagues in general?
(Check one in each column)

	Personal Opinion 1	Institution Policy 2	Colleagues Attitude 3	
a) Teaching should come first. Research must not interfere with the teaching process.	_____	_____	_____	45 - 47
b) Teaching should be combined with some research activities.	_____	_____	_____	48 - 50
c) Either should be done full time: there should not be any chance for conflict between the two.	_____	_____	_____	51 - 53
d) The Researcher should do some teaching so that students will have the benefit of contact with the Researcher.	_____	_____	_____	54 - 56
e) Other ____________________ (specify)	_____	_____	_____	57 - 59
____________________	_____	_____	_____	60 - 62

17 In your opinion should all faculty members be required to do at least some teaching?

YES____ NO____ 63

18 In your opinion should all faculty members be required to do at least some research?

YES____ NO____ 64

19 What are the requirements for obtaining a sabbatical year in your institution?

Don't know ______ 65

No. of years of service required ______ 66 - 67

Other requirements ________________________________ 68
(specify)

____

20 Are you or have you been eligible for sabbatical leave?

YES___ NO___ 69

If "no" skip to 25

21 Have you ever applied for a sabbatical year?

YES___ NO___ 70

If "no" skip to 25

22 If yes, when? ACADEMIC YEAR(S)___ 71 - 72

___

23 If your application was granted, when did you take it?

ACADEMIC YEAR(S)___ 73 - 74

___

24 If you took a sabbatical year, what main purpose did it serve?

____

____

____

____

____

____

____

25 Have you ever been granted a leave of absence without pay to do research?

YES____ NO____ 75

26 If yes, when did you take it? ACADEMIC YEAR _____ 76 - 77

What purpose did it serve?

There is controversy as to the relative merits of (a) a graduate degree devoted to promoting professional competence in a specialized area such as administration, guidance, or teaching methods, and not requiring original research resulting in a thesis; and (b) a graduate degree in which original research is a requirement, and training is given which leads to the production of original research and a thesis.

For purposes of this study we shall refer to (a) as a professional degree, and (b) as a research degree.

27 Are you in favour, for your university, of a system of degrees in education which reflects the distinction between the two types of training defined above?

YES____ NO____ 78

Comment ______________________________

	Professional	Research	Neither	
28 In making faculty appointments which kind of graduate degree is given preference generally in your faculty?	___ 1	___ 2	___ 3	05
29 What kind of graduate degree do you feel should be given preference?	___ 1	___ 2	___ 3	06
30 Into what kind of graduate degree are students in your faculty most generally directed?	___ 1	___ 2	___ 3	07
31 Into what kind of graduate degree program do you feel students should be directed?	___ 1	___ 2	___ 3	08

Comment if you wish ____

____

____

____

32 If an opening occurred for someone to teach a graduate course in each of the major fields listed below and if you were in charge of hiring, which of the following persons would you prefer to hire?

Use this code to indicate the type of person, using only one number for each reply.

CODE

A professor trained in a school of education	A professor trained outside a school of education
1- who has mostly taught in the field.	3- who has mostly taught in a related field.
2- who has mostly done research in the field.	4- who has mostly done research in a related field.

Other

5- a school practitioner who has a great deal of experience in the field.

6- no particular preference.

Presumed opening in:

____	Educational Administration	____	Educational Sociology	09 - 10
____	Guidance and Counseling	____	Philosophy of Education	11 - 12
____	History of Education	____	Child Development	13 - 14
____	Educational Psychology	____	Methods of Educational Research	15 - 16
____	Comparative Education	____	Special Education	17 - 18
		____	Other ____________ (specify)	19
		____	____________	20

Curriculum and Methods of teaching in:

____	Language Arts	____	Social Studies	21 - 22
____	Natural Sciences and Mathematics	____	Vocational Education	23 - 24
		____	Other ____________ (specify)	25
		____	____________	26

33 How would you compare the relative importance given to research in your faculty as compared to your university as a whole?

LESS ____ 2 SAME ____ 3 GREATER ____ 4 I HAVE NO IDEA ____ 1 27

34 Which of the following statements best expresses your own view of the appropriate role for administrators regarding faculty research; and which best describes the present role of the administrators of the faculty or department of Education.

(Check "yes" or "no" in each blank)

	Appropriate Role (or Ideal)		Present Role		
	YES	NO	YES	NO	
a) Administrators facilitate, actively encourage, and direct faculty research programs.	____	____	____	____	28 - 29
b) Administrators facilitate and actively encourage faculty research, but do not necessarily direct research programs.	____	____	____	____	30 - 31
c) Administrators only facilitate faculty research.	____	____	____	____	32 - 33
d) Administrators leave research entirely to the researchers.	____	____	____	____	34 - 35

35 Is there a "research" item on your faculty's budget?

YES ____ 1 NO ____ 2 I DON'T KNOW ____ 3 36

36 In your estimate, what is the emphasis given to the doctoral program relative to the master's program

(Check only one in each column)

	in the province in general?	in your school?	
a) greatly insufficient	___ 1	___ 1	37 - 38
b) insufficient	___ 2	___ 2	
c) sufficient	___ 3	___ 3	
d) excessive	___ 4	___ 4	
e) there is no doctoral program	___ 5	___ 5	
f) there is no master's program	___ 6	___ 6	

37 In your estimate, what is the emphasis given to the research graduate program relative to the professional graduate program

(Check only one in each column)

	in the province in general?	in your school?	
a) greatly insufficient	___ 1	___ 1	39 - 40
b) insufficient	___ 2	___ 2	
c) sufficient	___ 3	___ 3	
d) excessive	___ 4	___ 4	
e) there is no research graduate program	___ 5	___ 5	
f) there is no professional graduate program	___ 6	___ 6	

38 What proportion of the Faculty of Education should, in your opinion, be involved in supervising student research?

___ 0% ___ 25% ___ 33% ___ 50% ___ 66% ___ 75% ___ 100% 41 - 43

Comment ____

____

39 To what extent should other departments and faculties be involved with graduate students pursuing research degrees in Education?

(Check as many as apply.)

	YES	NO	
a) not at all	____	____	44
b) to the extent of providing part of their training	____	____	45
c) to the extent of supervising them in their research when pertinent	____	____	46
d) in evaluating them for the degree	____	____	47
e) Other ______________________ (specify)	____	____	48

____

40 With respect to admissions policy, which of the following requirements are likely to insure greater academic quality of students in graduate programs requiring a research thesis in Education?.

(Check as many as you deem necessary.)

	Master's Level		Doctoral Level		
	YES	NO	YES	NO	
a) professional training	____	____	____	____	49 - 50
b) teaching experience	____	____	____	____	51 - 52
c) high grade point average in undergraduate degree	____	____	____	____	53 - 54
d) graduate record exam or similar test	____	____	____	____	55 - 56
e) letters of recommendation	____	____	____	____	57 - 58
f) no particular requirement other than undergraduate degree	____	____	____	____	59 - 60
e) other ______________________ (specify)	____	____	____	____	61 - 62

41 Do you feel that the quality of a graduate research degree achieved through summer school sessions relative to one achieved during regular sessions is:

a) poorer ___ 1 63

b) equivalent ___ 2

c) better ___ 3

d) qualitatively different ___ 4

Explain (d)____

42 How would a greater number of summer school students affect the research capabilities of your department?

a) not at all ___ 1 64

b) increase them ___ 2

c) decrease them ___ 3

Comment ____

____

43 In your opinion is the number of graduate students in Education planning careers in educational research

a) seriously insufficient ___ 1 65

b) insufficient ___ 2

c) sufficient ___ 3

d) excessive ___ 4

Comment ____

____

The following section of the questionnaire is intended to elicit information about the nature of the projects already studied and problems currently under study in the province, for three reasons: first, so that researchers may learn what kinds of experience are available should they wish to consult one another; second, by making available an inventory of ongoing research, unnecessary duplication may be avoided or more systematic replication may be attempted; and third, to help identify fields in which research is being attempted, so that the study of specific problems can be encouraged.

44 As far as you know in which of the following areas, if any, is research now being undertaken in your faculty, and in which areas would you like to see more research?

	Now		Would like more		
	YES	NO	YES	NO	
General					
School finance	____	____	____	____	05 - 06
Educational administration or organization (other than finance)	____	____	____	____	07 - 08
Tests and measurements	____	____	____	____	09 - 10
Other research methodology	____	____	____	____	11 - 12
Guidance and counseling	____	____	____	____	13 - 14
Methods of instruction	____	____	____	____	15 - 16
Talent, creativity of students	____	____	____	____	17 - 18
Special education	____	____	____	____	19 - 20
Psychology of learning	____	____	____	____	21 - 22
Child development	____	____	____	____	23 - 24
Adolescent development	____	____	____	____	25 - 26
School-community relations	____	____	____	____	27 - 28
Teacher personality	____	____	____	____	29 - 30
Teaching as a profession	____	____	____	____	31 - 32
History of education	____	____	____	____	33 - 34
Comparative education	____	____	____	____	35 - 36
Programmed instruction	____	____	____	____	37 - 38
Educational technologies	____	____	____	____	39 - 40
Philosophy of education	____	____	____	____	41 - 42
Teacher training research	____	____	____	____	43 - 44
Sub-cultural differences of students	____	____	____	____	45 - 46
Curriculum research in:					
Mathematics	____	____	____	____	47 - 48
Natural sciences	____	____	____	____	49 - 50
Social studies	____	____	____	____	51 - 52
Reading	____	____	____	____	53 - 54
Foreign languages	____	____	____	____	55 - 56
Other language arts	____	____	____	____	57 - 58
Business and distributive education	____	____	____	____	59 - 60
Physical education	____	____	____	____	61 - 62
Other (what?) ____________	____	____	____	____	63 - 64
____________	____	____	____	____	65 - 66

45 With respect to the last three **most important** research projects that you have completed, please provide the following information

Date started (approx.) Date completed (approx.) Was it your thesis?

YES NO

MONTH YEAR MONTH YEAR ___ ___ 05 - 13

1st) MAJOR HYPOTHESIS ______________________________

____

MONTH YEAR MONTH YEAR ___ ___ 14 - 22

2nd) MAJOR HYPOTHESIS ______________________________

____

MONTH YEAR MONTH YEAR ___ ___ 23 - 31

3rd) MAJOR HYPOTHESIS ______________________________

____

46 Using the same format please round out the list of research completed in the last two academic years (if any) which has not already been listed in the previous question.

Date started (approx.) Date completed (approx.) Was it your thesis?

YES NO

MONTH YEAR MONTH YEAR ___ ___ 32 - 40

1st) MAJOR HYPOTHESIS ______________________________

____

MONTH YEAR MONTH YEAR ___ ___ 41 - 49

2nd) MAJOR HYPOTHESIS ______________________________

____

MONTH YEAR MONTH YEAR ___ ___ 50 - 58

3rd) MAJOR HYPOTHESIS ______________________________

____

47 In the same way as above, report on projects now under way. In the event that a question or hypothesis is directly related to the thesis of one of your students, write the name of that student in parentheses following the statement of the question or hypothesis.

Date started (approx.)		Date completed (approx.)		Is it your thesis?		
				YES	NO	
MONTH	YEAR	MONTH	YEAR	____	____	59 - 67

1st) MAJOR HYPOTHESIS ____

____

MONTH	YEAR	MONTH	YEAR	____	____	05 - 13

2nd) MAJOR HYPOTHESIS ____

____

MONTH	YEAR	MONTH	YEAR	____	____	14 - 22

3rd) MAJOR HYPOTHESIS ____

____

48 Do you have any research plans related to education for the next two years? YES ____ NO ____ 23

If "yes", would you describe them briefly in terms of questions, problems or hypotheses.

____

____

____

____

49 From what population(s) are you drawing your data for your research?

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Parents	____	____	____	____	24 - 25
Teachers	____	____	____	____	26 - 27
Administrators	____	____	____	____	28 - 29
Preschool children	____	____	____	____	30 - 31
Grades 1-3 (Primary) pupils	____	____	____	____	32 - 33
Grades 4-6 (Elementary) pupils	____	____	____	____	34 - 35
Grades 7-11(Secondary) pupils	____	____	____	____	36 - 37
CEGEP students	____	____	____	____	38 - 39
Post-secondary students	____	____	____	____	40 - 41
University students	____	____	____	____	42 - 43
School board members	____	____	____	____	44 - 45
University personnel	____	____	____	____	46 - 47
Others ______________________ (specify)	____	____	____	____	48 - 49

50 What data gathering methods do you use?
Exclude student projects which are not a part of your own basic research. (Check as many as apply.)

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Participant Observation	____	____	____	____	50 - 51
Non-participant Observation	____	____	____	____	52 - 53
Interview	____	____	____	____	54 - 55
Questionnaire	____	____	____	____	56 - 57
Bibliographic	____	____	____	____	58 - 59
Content analysis	____	____	____	____	60 - 61
Experimental	____	____	____	____	62 - 63
Available Data	____	____	____	____	64 - 65
Others ______________________ (specify)	____	____	____	____	66 - 67
______________________	____	____	____	____	68 - 69

51 What are your analytic approaches?
Exclude student projects which are not a part of your own basic research. (Check as many as apply.)

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Historical	____	____	____	____	05 - 06
Comparative	____	____	____	____	07 - 08
Logical	____	____	____	____	09 - 10
Theoretical	____	____	____	____	11 - 12
Statistical (descriptive)	____	____	____	____	13 - 14
Statistical (inferential)	____	____	____	____	15 - 16
Others ____________ (specify)	____	____	____	____	17 - 18
____________					19 - 20

52 In your present position, do you usually emphasize

a) Research primarily undertaken to test or expand theory	____ 1	21
b) Research primarily undertaken to improve practice	____ 2	
c) Both about equally	____ 3	
d) Other ____________ (specify)	____ 4	

53 In your present position, do you usually emphasize

a) Research related to a professional area e.g. administration, etc.	____ 1	22
b) Research related to an academic area e.g. psychology, philosophy, etc.	____ 2	
c) Both about equally	____ 3	
d) Other ____________ (specify)	____ 4	

54 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?
(Check as many as you wish)

a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies". ____ 23

b) Designing new curricula and methods of instruction. ____ 24

c) Evaluating the effectiveness of new curricula and methods. ____ 25

d) Local school surveys (curriculum, financial, plant, etc.). ____ 26

e) Investigating factors which affect the teaching-learning process in the classroom. ____ 27

f) Disseminating new curricula methods of instruction, or other school practices. ____ 28

g) Investigating factors which affect school administration. ____ 29

h) General psychological studies of human learning or development. ____ 30

i) Presenting evidence to legislators of the need for greater support for the schools. ____ 31

j) Developing new tests and measurements. ____ 32

k) Analyzing the key concepts or philosophical assumptions underlying current educational issues. ____ 33

l) Studying the educational research journals for lecture materials. ____ 34

55 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research". (Write the appropriate letters in the space below in order of their importance.)

1st ____ 2nd ____ 3rd ____ 37 - 39

56 Have the following factors tended to influence your choice of research problems to date? (Check as many as apply)

	YES	NO	
a) Past experience not related to profession or training	____	____	40
b) Training and ability	____	____	41
c) Preoccupations of your department or faculty	____	____	42
d) Availability of funds	____	____	43
e) Current educational problems	____	____	44
f) Problems related to content field you are teaching	____	____	45
g) Research in teaching methods	____	____	46
h) Problems related to faculty-student relations	____	____	47
i) Other ______________________ (specify)	____	____	48

Indicate 1st, 2nd, 3rd choice.

1st CHOICE ____ LETTER 2nd CHOICE ____ LETTER 3rd CHOICE ____ LETTER 49 - 51

57 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

YES____ NO____ 52

Comment (if you wish): ______________________________

____

N.B. In Q. 56, item e) was interchanged with item f) in the French questionnaire; the analyses have taken this fact into account.

FE 22

58 There is controversy as to who is responsible for the actual conception as well as for the conduct of research in Education. Some educators feel that every classroom teacher should conduct research, whereas others feel that only those with sophisticated training in research at the graduate level should conduct research. Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?

(Check as many as necessary)

	Degree of Involvement				
	NONE 1	MODERATE 2	HEAVY 3	VERY HEAVY 4	
a) Class Teachers	____	____	____	____	53
b) School Administrators	____	____	____	____	54
c) Professors involved in Teacher Education	____	____	____	____	55
d) Professional Educational Researchers in Faculties of Education	____	____	____	____	56
e) Behavioral Scientists in Faculties of Education	____	____	____	____	57
f) Behavioral Scientists in Other Faculties	____	____	____	____	58
g) Other ______________ (specify)	____	____	____	____	59

59 Could you inform us on the sources and amounts of your research funds for the last two academic years for work done (a) in this province; (b) elsewhere.
Do not include graduate fellowships, student assistantships, or similar aid.

Year	Sources	Amounts	In the Province	Elsewhere	
1967-68	____________________	$ ____________	____	____	05 - 12
	____________________	$ ____________	____	____	13 - 20
	____________________	$ ____________	____	____	21 - 28
1968-69	____________________	$ ____________	____	____	29 - 36
	____________________	$ ____________	____	____	37 - 44
	____________________	$ ____________	____	____	45 - 52

60 If you received research grants in the past two academic years did they include remuneration for

	YES	NO	
a) Yourself	____	____	53
b) Research Assistants	____	____	54
c) Student Assistants	____	____	55
d) Consultants	____	____	56
e) Secretaries & Clerical	____	____	57
f) Others ______________________ (specify	____	____	58

61 Are there financial needs in your research activities which are not being supported by grants?

YES____ NO____ 59

If "yes" specify below

PURPOSE FOR WHICH MONEY IS NEEDED	MODERATELY IMPORTANT 1	IMPORTANT 2	VERY IMPORTANT 3	
______________________	________	________	________	60
______________________	________	________	________	61
______________________	________	________	________	62

62 In searching out funds for research, have you made formal applications in the last two years?

YES____ NO____ 05

If "yes" to whom did you apply, and to what extent were you successful?

Applied to	Amount requested	Percent received	
______________________	____________	____	06 - 14
______________________	____________	____	15 - 23
______________________	____________	____	24 - 32

63 Do you need any equipment not available to you for your present projects or any that you would like to carry out.

YES____ NO____ 33

If "yes" specify below.

EQUIPMENT NEEDED (specify)	MODERATELY IMPORTANT 1	IMPORTANT 2	INDISPENSABLE 3	
____	____	____	____	34
____	____	____	____	35
____	____	____	____	36

64 Comment on the availability of bibliographic resources relevant to your research work.

	Locally Available			Available from outside sources e.g. interlibrary loan			
	POOR 1	ADEQUATE 2	EXCELLENT 3	POOR 1	ADEQUATE 2	EXCELLENT 3	
Current journals	____	____	____	____	____	____	37 - 38
Bound periodicals	____	____	____	____	____	____	39 - 40
Research Reports, final	____	____	____	____	____	____	41 - 42
Ongoing Research, pre-publication	____	____	____	____	____	____	43 - 44
Abstracts	____	____	____	____	____	____	45 - 46
Microfiches	____	____	____	____	____	____	47 - 48
Microfilms	____	____	____	____	____	____	49 - 50
Other ____ (specify)	____	____	____	____	____	____	51 - 52
____	____	____	____	____	____	____	53 - 54
____	____	____	____	____	____	____	55 - 56

65 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

YES____ NO____ 57

If "yes", in what form would you find it most useful?

____

____

____

____

66 What specialized consultant services and personnel are available to you in your role as researcher?

	NOT NECESSARY IN MY RESEARCH 1	NOT AVAILABLE 2	AVAILABLE 3	
Information retrieval	____	____	____	58
Documentation	____	____	____	59
Data Bank	____	____	____	60
Census-type Data	____	____	____	61
Statistics Adviser	____	____	____	62
Research Design Consultant	____	____	____	63
Computer Services	____	____	____	64
Others (specify)				
____________________	____	____	____	65
____________________	____	____		66

67 How accessible is the population from which you would like to draw your data? Please specify the population(s).

POPULATION	NOT ACCESSIBLE 1	NOT VERY ACCESSIBLE 2	READILY ACCESSIBLE 3	
____________________	____	____	____	67
____________________	____	____	____	68
____________________	____	____	____	69
____________________	____	____	____	70

68 Are there any needs for data that are not met? YES___ NO___ 71

If "yes" specify below.

DATA NEEDED (specify)	MODERATELY IMPORTANT 1	IMPORTANT 2	VERY IMPORTANT 3	
___	___	___	___	72
___	___	___	___	73
___	___	___	___	74
___	___	___	___	75

69 Indicate the personnel available to you in your role as researcher.

	NOT NECESSARY TO MY RESEARCH 1	NOT AVAILABLE 2	AVAILABLE 3	
Secretary	___	___	___	05
Typist	___	___	___	06
General Clerical	___	___	___	07
Translator	___	___	___	08
Computer Programmers	___	___	___	09
Non-student Research Assistants	___	___	___	10
Student Research Assistants	___	___	___	11
Guidance to Sources of Funds	___	___	___	12
Technicians	___	___	___	13
Other ___ (specify)	___	___	___	14
___	___	___	___	15

70 Interchange between schools or departments of education and other divisions in the university are achieved in a variety of ways Which of the following arrangements already exist and which would you like to see established?

	Already exist		Would like to see established		
	YES	NO	YES	NO	
a) Participation of non-education professors on examination committees for theses	___	___	___	___	16 - 17
b) Participation of non-education professors in the selection of the faculty of education	___	___	___	___	18 - 19
c) Interdisciplinary committees or seminars which are concerned with scholarly issues	___	___	___	___	20 - 21
d) Joint teaching appointments	___	___	___	___	22 - 23
e) Joint research appointments	___	___	___	___	24 - 25
f) Visiting professors from other faculties of your universities for teaching	___	___	___	___	26 - 27
g) Visiting professors from other faculties of your universities for research	___	___	___	___	28 - 29
h) Other types of interchange					
______________________ (which?)	___	___	___	___	30 - 31
______________________	___	___	___	___	32 - 33

71 In this academic year to what extent have you worked together with other scientific personnel in your research activities?

PEOPLE YOU WORK WITH:	NEVER 1	SELDOM 2	OFTEN 3	VERY OFTEN 4	
a) Researchers in other organizations	___	___	___	___	34
b) Colleagues in your organization	___	___	___	___	35
c) Research Assistants (not students)	___	___	___	___	36
d) Research Assistants (students)	___	___	___	___	37
e) Student Aides	___	___	___	___	38
f) Consultant (specify field)					
___	___	___	___	___	39
___	___	___	___	___	40
g) Other ___ (specify)	___	___	___	___	41
___	___	___	___	___	42
PEOPLE YOU WORK FOR:					
h) as Consultant	___	___	___	___	43
i) as Assistant	___	___	___	___	44
j) Other ___ (specify)	___	___	___	___	45
___	___	___	___	___	46

72 Where are the persons referred to in 71 located?

	YES	NO	
Quebec	___	___	47
Rest of Canada	___	___	48
United States	___	___	49
France	___	___	50
United Kingdom	___	___	51
Belgium	___	___	52
Switzerland	___	___	53
Other ___ (specify)	___	___	54
___	___	___	55

73 In this academic year to what extent has your research work involved you in direct interaction with other educational personnel?

	NEVER 1	SELDOM 2	OFTEN 3	VERY OFTEN 4	
a) Directors-General	____	____	____	____	56
b) School Principals	____	____	____	____	57
c) Supervisors of Subjects					
______________ (subject)	____	____	____	____	58
______________ (subject)	____	____	____	____	59
d) Other School Administrators					
______________ (specify)	____	____	____	____	60
______________	____	____	____	____	61
e) Teachers	____	____	____	____	62
f) Professors	____	____	____	____	63
g) Pupils	____	____	____	____	64
h) Teacher Organizations	____	____	____	____	65
i) Other ______________ (specify)	____	____	____	____	66
______________	____	____	____	____	67

74 In general, in the academic year how fruitful have interchanges been with the academic departments in the university?

NONE OCCURRED ___1 LITTLE ___2 MODERATELY ___3 VERY ___4 68

Did you encounter any problems with interchanges? YES____ NO____ 69

If "yes", specify ________________________________

____

____

What directions would you like future interchanges to take?

____

____

____

____

You had the chance in various parts of this questionnaire to express your needs and desires, as a researcher in education in this province. This final section is intended to give you the opportunity to make known any other wishes, observations, opinions, and particularly suggestions which might be useful in the attempt to develop a favorable climate for the conduct of fruitful educational research. This section is therefore not as structured as the rest of the questionnaire, but provides you with blank spaces to tell us the things that we could not have foreseen when we constructed our questionnaire.

Use next page, if necessary.

75 In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions.

76 Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher? Try to indicate roughly the order of importance of your suggestions.

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Vol. II

STATUS AND PROSPECTS
# of educational research in québec

Eigil D. Pedersen
T. Annette Faucher
Keith J. Dowd

1971

Department of Education
Institute of Research in Education

AC012256

STATUS AND PROSPECTS
OF
EDUCATIONAL RESEARCH IN QUEBEC

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VOLUME II

DEPARTMENT OF EDUCATION
INSTITUTE OF RESEARCH IN EDUCATION
QUEBEC

262

1971

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FOREWORD

This volume contains Chapters III, IV, and V of the report on educational research in Quebec, as surveyed in 1968-1969, along with recommendations submitted by the authors in September 1970, to the Quebec Department of Education.

Chapter III analyzes responses from students in the field of education, and Chapter IV deals with data from researchers in organizations other than the faculties of education. Chapter V compares and contrasts the information provided by all the categories of respondents to our survey represented in Chapters I to IV, and attempts to draw conclusions from a study of research productivity as well as from the different patterns observed.

The reader is referred to the Introduction to Volume I for details on populations studied.

CHAPTER III

INTRODUCTION

The purpose of this part of the inventory is to provide information about the present and potential capacity in the Province of Quebec to do educational research. To some extent this chapter focuses on the future in that it examines the characteristics and programs of the students who are undertaking graduate work. As in the previous chapter, comparative descriptions deal only with the three largest faculties of education, but factors related to present or potential research productivity result from the analysis of all cases from all the six universities. We have had to adapt the description of our population in the light of the administrative structure of the particular universities from which we were drawing our population. For instance, at University C, not all graduate students of education were registered in the Faculty of Education, but we have included them in our population.[1]

A higher proportion of graduate students in education are pursuing their studies part-time than in most other faculties. Therefore, on those occasions where the characteristics of part-time students differ markedly from those of full-time students, we present the findings separately for each of these groups. Where differences between part-time & full-time students are small the presentation deals with full-time students only. We do not present data separately by sex except in Table III-3.

One of the characteristics of professional faculties such as education which makes them somewhat different from academic faculties is that they are largely concerned with practical training rather than theoretical education. This has resulted in the existence of graduate degrees for which the thesis is not a requirement. One of our tasks in this chapter is to evaluate the degree of student commitment to graduate programs requiring research and therefore likely to produce researchers.

Another concern with this chapter is the extent to which students feel that they can interact personally with faculty in research activities, on the grounds that learning research by doing it is probably the productive way of developing future research workers. Further to this we are concerned with the kind of research emphases being applied; hence we have obtained information concerning the populations studied and the kind of data analysis methods used.

---

[1] The actual location of students as to faculty and program for the six universities is summarized in Appendix III-I; included is information about Quebec residents studying out of the province.

The conduct of research is a lengthy commitment and expensive to the student. Therefore, we have attempted to determine the extent to which students are supported financially, and what the sources of that support are. In addition, we were interested in their ideas about their own future, and specifically we have asked them whether or not they plan to pursue research as a major part of their future careers. In order to enable us to draw comparisons between faculty and students, and between students in different universities, we have obtained information about their beliefs with regard to such issues as the degree to which professors and classroom teachers and other educators should be involved in the actual conception and conduct of research, what they felt the emphasis on research training relative to that on professional graduate training is, in their faculty and indeed, on what they believe should be included in a definition of educational research. These and other data constitute the content of this chapter.

The order of presentation is parallel to that of the previous and following chapters, as follows: definition of research, background, current activities, attitudes related to research, factors related to the undertaking of research by students, the kinds of research being done, the degree of interaction with other scientific personnel and attitudes toward interaction, problems related to the conduct of research, the training of researchers, research productivity and research plans.

DEFINITION OF EDUCATIONAL RESEARCH

We have already observed in Chapter II that there are few response areas of high consensus among professors regarding a definition of educational research. Table III-1 bears on the same issues, but deals with student responses to the same question.

The per cents listed on Table III-1 show that the item most frequently selected in all universities is "investigating factors which affect the teaching-learning

TABLE III-1

Q. 33 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies".	75	34	19	59	40	29	134	34
b) Designing new curricula and methods of instruction.	161	73	18	56	100	73	279	72
c) Evaluating the effectiveness of new curricula and methods.	169	77	28	88	119	87	316	81
d) Local school surveys (curriculum, financial, plant, etc.)	76	35	10	31	41	30	127	33
e) Investigating factors which affect the teaching-learning process in the classroom.	176	80	29	91	122	90	327	84
f) Disseminating new curricula, methods of instruction, or other school practices.	67	30	8	25	39	28	114	29
g) Investigating factors which affect school administration.	49	22	21	66	24	18	94	24
h) General psychological studies of human learning or development.	143	65	25	78	99	72	267	69
i) Presenting evidence to legislators of the need for greater support for the schools.	19	9	2	6	10	7	31	8
j) Developing new tests and measurements.	135	61	21	66	77	56	233	60
k) Analyzing the key concepts or philosophical assumptions underlying current educational issues.	74	34	19	59	64	47	157	40
l) Studying the educational research journals for lecture materials.	33	15	5	16	29	21	67	17
Number of Respondents	220		32		137		389	

process in the classroom". Item c), "evaluating the effectiveness of new curricula and methods", is the second in frequency of selection. The least popular item is "presenting evidence to legislators of the need for greater support for the schools" and this is true at all three universities. The next least frequently selected item is "studying the educational research journals for lecture materials". The exception in this case is University C, where "investigating factors which affect school administration" is the second least popular choice.

The only outstanding difference among universities on any particular item is "investigating factors which affect school administration"; about two thirds of the respondents agree that this is research at University B, but only about one in five at Universities A and C are of this opinion.

As was the case with professors, there are areas where respondents are quite split in their opinion, but the actual items eliciting disagreement are different for students as compared with professors. These include items k) analyzing key concepts or philosophical assumptions underlying current educational issues, j) developing new tests and measurements, a) collecting statistics on school practices and educational outcomes, and d) local school surveys.

Table III-2 deals with items which are considered to be of most importance for the future of education.

All universities select item e) "investigating factors which affect the teaching-learning process in the classroom", as first choice. As second choice, University A selects item c) "evaluating the effectiveness of new curricula and methods", whereas Universities B and C pick item h) "general psychological studies of human learning or development". As third choice, University A picks e), and Universities B and C choose c).

On the whole, consensus is quite high in regard to which are the important activities for the long-range improvement of education. But students in education seem no more in agreement among themselves as to what constitutes research than are their professors.

TABLE III-2

Q. 34 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as " research"?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
1st CHOICE								
E)	46	21	7	22	40	30	93	24
2nd CHOICE								
C)	52	24	5	16	23	17	80	21
E)	43	20	7	22	30	22	80	21
3rd CHOICE								
C)	31	14	10	31	36	26	77	20
Number of Respondents	220		32		137		389	
MOST FREQUENTLY CHOSEN AS 1st	E		E		E		E	
MOST FREQUENTLY CHOSEN AS 2nd	C		H		H		C - E	
MOST FREQUENTLY CHOSEN AS 3rd	E		C		C		C	

CHARACTERISTICS AND BACKGROUND OF STUDENTS

Table III-3 shows that a majority of graduate students in education, both full-time and part-time, are men. Further, with the exception of University C, where men are more likely to be part-time students than are women, the proportion of men to women seems the same, whether the students are part-time or full-time.

It is quite likely that part-time students have less time than full-time students to spend on resarch. Table III-3 shows that at University B, 84 per cent of responding students are enrolled in part-time programs, as contrasted with 54 per cent at University C and only 26 per cent at University A. In terms of the population being served, Universities A and C are different from University B, with regard to research potential in the student body.

TABLE III-3

SEX OF FULL-TIME AND PART-TIME STUDENTS

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
FULL-TIME STUDENTS								
Men	182	83	22	69	94	68	298	77
Women	38	17	10	31	43	32	91	23
Total	220	74	32	16	137	46	389	49
PART-TIME STUDENTS								
Men	63	83	114	69	130	80	307	78
Women	13	17	51	31	32	20	96	22
Total	76	26	165	84	162	54	403	51
TOTAL	296		197		299		792	

Table III-4 presents the age distributions of full-time and part-time graduate students in education in the three universities.

TABLE III-4

AGE IN YEARS IN APRIL 1969, FULL-TIME AND PART-TIME STUDENTS

	UNIVERSITIES							
	A		B		C		TOTAL	
AGE *	FT	PT	FT	PT	FT	PT	FT	PT
19 - 21	15%	0	0	1%	0	0	8%	0
22 - 24	44	23%	6%	5	40%	6%	39	9%
25 - 27	19	28	9	16	30	20	22	24
28 - 35	16	26	50	35	15	35	19	33
36 - 51	6	20	28	42	14	28	11	32
	220	76	32	165	137	162	389	403

* It should be noted that age intervals are not of equal size.

Students at Universities A and C are comparatively young, particularly at A, where 15 per cent of full-time students are between 19 and 21, and 44 per cent are between 22 and 24. By contrast, University B has more than three quarters of its graduate students above the age of 27; this may reflect the fact that admittance to all graduate programs excepting one requires teaching experience.

Although differences between the three universities are not quite as great among part-time students, the pattern is maintained: fully 42 per cent of part-time students at University B are 36 years old or older, whereas only 20 per cent at University A and 28 per cent at University C fall into this category. Table III-5 presents data showing that students at Universities A and C are less likely to have dependents than those at B; this is as one would expect, since they are younger.

TABLE III-5

PER CENT OF FULL-TIME AND PART-TIME STUDENTS HAVING ONE OR MORE DEPENDENTS

	UNIVERSITIES			
	A	B	C	TOTAL
Full-time students	24%	59%	32%	30%
Part-time students	49	65	58	59

While we have not cross-tabulated these background characteristics of students with research productivity, it seems reasonable to assume that young students without dependents who are enrolled in full-time programs would have more time to pursue research. If this is so, Universities A and C- especially University A-, would offer the best potential for the development of future educational research in Quebec.

The kinds of degrees that students have and are pursuing, particularly with regard to whether or not a thesis is required, has an important bearing on research productivity. Table III-6 presents a summary of this information for full-time students. Similar information for part-time students will be found in Appendix III-2.

TABLE III-6

Q. 7 Use the list below to indicate the degrees you have already obtained and the one you are currently working towards.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
UNDERGRADUATE DEGREES								
Nil	53	24	0	0	10	7	63	16
One	127	58	22	69	53	39	202	52
Two or more	40	18	10	31	74	54	124	31
TOTAL	220		32		137		389	
OTHER DEGREES WITHOUT THESIS REQUIREMENT								
LICENCE								
Completed	34	15	1	3	21	15	56	14
Course work in progress	73	33	1	3	6	4	80	21
TOTAL	107	49	2	6	27	20	136	35
MASTER'S								
Completed	5	2	6	19	6	4	17	4
Course work in progress	1	0	13	41	3	2	17	4
TOTAL	6	3	19	59	9	7	34	9
DOCTORATE								
Course work in progress	0	0	0	0	7	5	7	2
TOTAL	0	0	0	0	7	5	7	2
OTHER DEGREES REQUIRING THESIS								
LICENCE								
Completed	45	20	0	0	24	18	69	18
Lacking only thesis	12	5	0	0	0	0	12	3
Course work in progress	31	14	1	3	0	0	32	8
TOTAL	88	40	1	3	24	18	113	29
MASTER'S								
Completed	6	3	7	22	58	42	71	18
Lacking only thesis	10	5	1	3	37	27	48	12
Course work in progress	6	3	3	9	10	7	19	5
TOTAL	22	10	11	34	105	77	138	35
DOCTORATE								
Lacking only thesis	11	5	2	6	29	21	42	11
Course work in progress	4	2	5	16	26	19	35	9
TOTAL	15	7	7	22	55	40	77	20
OTHER DEGREES	18	8	1	3	9	7	28	7

Undergraduate degrees

The academic background of students enrolled in graduate degree programs in the three universities is extremely varied, ranging from 24 per cent at University A who report no undergraduate degree whatever, to more than half at University C holding two or more undergraduate degrees. These differences seem to result from different interpretations of what the term "graduate student" means; students at University B without at least one undergraduate degree do not fall into this classification. Students at University C have the most academic background and those at University A the least, among the graduate students being described in this chapter.

Degrees without thesis

Some graduate students in education are not required to write a thesis. This applies at all levels, particularly to the licence, but also the Master's to some extent, and in very few cases to the Doctorate. About 21 per cent of the respondents are currently involved with the licence (without thesis), but these are virtually all at the French universities, especially University A. The Master's without thesis accounts for the involvement of about four per cent of all the respondents, and these are practically all at University B. Only two per cent of the full-time students are pursuing the doctorate without thesis and these are all at University C.

Degrees requiring a thesis

Just under half (48 per cent) of the respondents are following a program requiring a thesis. Nineteen per cent of all students in University A are pursuing the licence requiring the thesis, and this appears to be the only university with such a program.

About three quarters of the graduate students at University C, about a third at University B, and only ten per cent at University A, have completed or are in a Master's program requiring the thesis. Students in University C are more likely than any other group to have completed a Master's degree with thesis. This would lead us to expect that a higher proportion of these students would be enrolled in the doctoral program requiring thesis, and this is in fact what the data in Table III-6 show with forty per cent of graduate students in University C being involved in this type of program, only half that proportion at B, and seven per cent at University A.

Full-time and part-time students

Comparing the part-time with the full-time respondents at the three universities, the only large difference is at University C, where the program is quite completely different for the two groups; whereas 4 per cent of the full-time students are engaged in the licence without thesis, fully 45 per cent of the part-time students are thus engaged. However, whereas 77 per cent of the full-time students are working on, or have completed, a Master's degree with thesis, only 4 per cent of the part-time are in this situation. University C makes a real distinction in program between full-time and part-time while this is not the case elsewhere. (Data concerning part-time respondents appear in Appendix III-2.)

Teacher Certification

Some but not all graduate students in education come from the ranks of professionally trained teachers. Table III-7 provides information about this.

TABLE III-7

Q. 8 Professional Teacher Training other than reported before.

	UNIVERSITIES							
	A		B		C		TOTAL	
HAVING CERTIFICATE(S)	N	%	N	%	N	%	N	%
Full-time students	102	46	26	81	47	34	175	45
Part-time students	61	80	148	90	134	83	343	85

Table III-7 shows that for full-time students the pattern of professional teacher training is quite different at the three universities. The majority at University B, 81 per cent,have teacher training, whereas a minority in both A and C, 46 per cent and 34 per cent respectively, have this background.

The picture for part-time students is very different from that for full-time students. In that case, the vast majority at all three universities have had teacher training, and indeed they are probably teaching during the main portion of their work week.

University B has a heavy professional preparation commitment which may result from the return of people to the same place from which they obtained their teacher training in order to do further study. On the other hand, the admission policies of University B require teacher-training background to more of its graduate degree programs than do the other two universities.

The distinction between academic and professional graduate degrees is related to a research component in the graduate programs leading to these degrees. It seems reasonable to predict that those with teacher certification would prefer professional graduate degrees programs (and therefore be less likely to do research) as compared to those students without teacher certificates. The analysis of this relationship is given in Table III-7A.

TABLE III-7A

HAVING A TEACHER CERTIFICATE RELATED TO RESEARCH ACTIVITY

HAVING A TEACHER CERTIFICATE	RESEARCH ACTIVITY							
	Pursuing a degree with research		Having done research in the past		Having research underway		Having plans for research in the future	
YES	65%	$p<.001$	30%	$p<.001$	28%	$p<.001$	52%	$p<.001$
NO	80%		44%		44%		69%	

Table III-7A suggests that teaching certification predisposes students to pursue degrees without research requirements. It might well follow, therefore, that one way to produce more researchers in education in the future would be to admit to good academic programs in education students without a background of teacher training.[2]

In addition, students who are certified teachers are less likely to have done research in the past, to have research under way, and to have plans for research in the future. All these differences shown in Table III-7A are significant at the .001 level of significance.

Teaching Experience

We have noted that students vary as to whether they have had teacher training. Similarly, they vary in their teaching experience preceding their graduate education. Table III-8 presents information about the kind of teaching experience that full-time graduate students in education have had.

TABLE III-8 *

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

TEACHING EXPERIENCE: LEVEL Full-time students	UNIVERSITIES A N	A %	B N	B %	C N	C %	TOTAL N	TOTAL %
ELEMENTARY	31	14	14	44	21	15	66	17
SECONDARY	65	29	22	69	42	30	129	33
CEGEP & POST-SECONDARY	22	10	1	3	20	15	43	11
UNIVERSITY & COLLEGE	13	6	2	6	7	5	22	6
Number of Respondents	220		32		137		389	

* Summary of Appendix III-3. Data for part-time students in Appendix III-4.

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[2] "... Schools which require both professional experience and a teaching certificate are least productive of researchers. Schools requiring only a teaching certificate or neither a certificate nor experience are most productive. Further, it appears that the requirement of professional experience is the only requirement of the two which is related to productivity regardless of the existence of the other requirement." (SIEBER, Sam D. & LAZARSFELD, Paul, Op. cit., p. 273)

We observe in Table III-8, that almost half of the respondents at University B have elementary school teaching experience; this compares to less than a fifth at the other two universities. Further, less than a third of the students at Universities A and C have secondary teaching experience, compared to about two thirds at University B. There is no significant amount of experience at the CEGEP[3] and Post-secondary level, nor at the university and college level in any of the three universities. There are no significant patterns relative to experience at the university and college level.

We have already noted that students with teacher training are less likely to be pursuing graduate education degrees with a research requirement than those without teacher training. We may well ask: what are the purposes of graduate education for experienced teachers? One possibility is that graduate degrees are used to enhance the chances of promotion in a career line that begins with teaching and ends with administration. To examine this possibility, we cross-tabulated teaching experience with the hope to work in the practice of educational administration following graduation. The result of this analysis is summarized in Table III-8A.

TABLE III-8A

TEACHING EXPERIENCE RELATED TO HOPE TO WORK IN THE PRACTICE OF EDUCATIONAL ADMINISTRATION

HAVING TEACHING EXPERIENCE	HOPE TO WORK IN THE PRACTICE OF EDUCATIONAL ADMINISTRATION	
YES	32%	$p < .001$
NO	13%	

The figures in Table III-8A suggest that many graduate students with teaching experience are looking forward to administrative rather than research posts. In terms of viewing graduate students in education as potential educational researchers, one might again conclude (see p. 11) that a good way to increase the research potential would be to increase the proportion of graduate students in education without professional training or teaching experience.

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[3] Collège d'enseignement général et professionnel - a type of junior college specific to Quebec which will soon be required as an intermediate step between high school and university.

Administrative Experience

A similar question about administrative experience on the part of respondents was asked; few indicate any such experience. Details of responses to this question appear in Appendices III-5 and III-6.

Research Experience

Experience other than teaching and administration may also be relevant to the pursuit of graduate training. Table III-9 deals with the research as well as the industrial and professional experience of the full-time respondents.

TABLE III-9

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

	UNIVERSITIES							
	A		B		C		TOTAL	
Experience in years	N	%	N	%	N	%	N	%
RESEARCH								
1	11	5	7	22	20	15	38	10
2	11	5	0	0	11	8	22	6
3 - 5	1	0	0	0	8	6	9	2
Total	23	10	7	22	39	29	69	18
INDUSTRIAL & PROFESSIONAL								
1	0	0	2	6	4	3	6	2
2	2	1	1	3	0	0	3	1
3 - 5	0	0	0	0	0	0	0	0
Total	2	1	3	9	4	3	9	2
Number of Respondents	220		32		137		389	

Table III-9 shows that the proportion of respondents having any experience in Universities A, B, and C is roughly ten, twenty, and thirty per cent. The latter group also has more research experience per respondent than respondents at Universities A and B. Industrial and professional experience other than teaching does not appear to be an important background factor for graduate students in education.

There is no real difference between full-time and part-time respondents in this regard. (See Appendix III-7.)

Opinion Concerning Admissions Policies

Table III-10 presents information bearing on the attitudes of students concerning certain requirements for admission to graduate education programs.

Table III-10 shows that there is substantial agreement that professional training is an important way to insure greater academic quality of students. Universities A and C give second place to teaching experience, while University B, where teaching experience is actually more prevalent, gives second place about equally to a high grade point average in the undergraduate degree and to letters of recommendation.

Our analysis thus far leads us to believe that research-oriented students are more likely to be those without teacher training and experience; but the figures in the above table show that students currently enrolled are not in favour of the recruitment of graduate students in education without training or experience. Further, it may be that those graduate students who themselves have training and experience would favour these characteristics in graduate students more than those who have not. Tables III-10A and III-10B present the data for these analyses.

The data in Table III-10A show clearly that students who themselves hold teacher certificates, more than those who do not, feel that teaching certification, and especially teaching experience, would ensure a greater academic quality of students in graduate programs at the Master's level.

TABLE III-10

Q. 36 With respect to admissions policy, which of the following requirements are likely to insure greater academic quality of students in graduate programs requiring a research thesis in Education?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) PROFESSIONAL TRAINING								
Master's Level	152	69	22	69	71	52	245	63
Doctoral Level	147	67	22	69	74	54	243	62
b) TEACHING EXPERIENCE								
Master's Level	89	40	14	44	56	41	159	41
Doctoral Level	94	43	13	41	60	44	167	43
c) HIGH GRADE POINT AVERAGE IN UNDERGRADUATE DEGREE								
Master's Level	46	21	17	53	42	31	105	27
Doctoral Level	38	17	18	56	31	23	87	22
d) GRADUATE RECORD EXAMINATION OR SIMILAR TEST								
Master's Level	66	30	11	34	45	33	122	31
Doctoral Level	49	22	12	38	36	26	97	25
e) LETTERS OF RECOMMENDATION								
Master's Level	35	16	19	59	17	12	71	18
Doctoral Level	28	13	18	56	14	10	60	15
f) NO PARTICULAR REQUIREMENT OTHER THAN UNDERGRADUATE DEGREE								
Master's Level	61	28	4	13	28	20	93	24
Doctoral Level	46	21	3	9	21	15	70	18
g) OTHER								
Master's Level	28	13	3	9	21	15	52	13
Doctoral Level	33	15	2	6	27	20	62	16
Number of Respondents	220		32		137		389	

TABLE III-10A

HAVING A TEACHER CERTIFICATE RELATED TO BELIEF THAT TEACHING EXPERIENCE AND TEACHER CERTIFICATION SHOULD BE REQUIRED OF CANDIDATES FOR MASTER'S DEGREES

HAVING TEACHER CERTIFICATE	ADMISSION TO MASTER'S DEGREE SHOULD REQUIRE	
	Teacher Cert.	Teaching Exp.
YES	93%	83%
	$p < .001$	$p < .001$
NO	83%	34%

TABLE III-10B

HAVING TEACHING EXPERIENCE RELATED TO THE BELIEF THAT TEACHING EXPERIENCE SHOULD BE REQUIRED OF CANDIDATES FOR MASTER'S AND DOCTOR'S DEGREES

HAVING TEACHING EXPERIENCE	EXPERIENCE SHOULD BE REQUIRED AT:	
	Master's level	Doctor's level
YES	88%	88%
	$p < .001$	$p < .001$
NO	50%	63%

Table III-10B indicates that students with teaching experience believe that teaching experience should be a requirement for candidates in both Master's and Doctor's graduate programs in education.

From these tables, we must conclude that students who are qualified, experienced teachers, are not in favour of the admission of just the group most likely to be research-oriented, candidates without teaching experience and certification.

It appears that experienced, certified graduate students in education are more likely than others to become professors of education.[4] Thus, this situation has elements of a self-perpetuating cycle which leads us to conclude that the insistance on teaching background and experience in all graduate students of education is probably a negative factor in the development of research potential for the future.

CURRENT ACTIVITIES

We wished to know the additional activities other than courses and theses, carried out by student respondents. Table III-11 provides the data.

TABLE III-11

Q. 17 Along with normal studies towards your degree, are you this year engaged in any of the following activities?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
TEACHING	49	22	19	59	41	30	109	28
RESEARCH (OTHER THAN FOR YOUR THESIS)	26	12	11	34	30	22	67	17
INTERNSHIP PROGRAM	77	35	12	38	66	48	155	40
OTHER	23	11	3	9	24	17	50	13
Number of Respondents	220		32		137		389	

For full-time students, the dominant activity at Universities A and C is internship whereas the dominant activity at University B is teaching. Research is always a third in all three universities.

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[4] See Table II-5, from which we calculate that 83 per cent of professors at University B, and 58 per cent at Universities A and C have teacher certificates.

One would expect that those currently engaged in research (other than thesis) would be more likely to have plans for research in the future. The figures in Table III-11A deal with this relationship.

TABLE III-11A

CURRENT RESEARCH INVOLVEMENT RELATED TO HOPE TO WORK IN EDUCATIONAL RESEARCH AFTER GRADUATION

CURRENTLY ENGAGED IN RESEARCH	HOPE TO WORK IN EDUCATIONAL RESEARCH AFTER GRADUATION
YES	43%
	$p < .001$
NO	19%

As Table III-11A shows, those students involved in research other than thesis during their graduate training are significantly more likely to expect to be working in the area of educational research following graduation than those not so involved.

Table III-12 deals with the research requirement for the degrees being pursued by full-time and part-time respondents.

Analysis of the data in the first part of Table III-12 shows that there is little difference in the perception of a research requirement by full-time students or part-time students at University A (74 per cent or more).

However, at Universities B and C, part-time students are less likely to indicate a research requirement in their degree work. Again this is consistent with former findings showing very little difference between full and part-time degree requirements, programs and so on, at University A, but great differences at Universities B and C.

As to how important the research requirement is considered, over 40 per cent of students, full-time or part-time, consider it very important or extremely important and perceive that their professors do so; the rest are likely to say "moderately important".

TABLE III-12

Q. 15 Is there a research requirement* for the degree you are pursuing? If YES, how important do you and your professors consider it to be?

	UNIVERSITIES							
	A		B		C		TOTAL	
RESEARCH REQUIRED	N	%	N	%	N	%	N	%
Full-time students								
YES	174	79	26	81	130	95	330	85
NO	39	18	5	16	7	5	51	13
NO RESPONSE	7	3	1	3	0	0	8	2
Part-time students								
YES	56	74	69	42	103	64	228	57
NO	14	18	93	56	53	33	160	40
NO RESPONSE	6	7	3	2	6	4	15	4
CONSIDERED EXTREMELY OR VERY IMPORTANT**								
Full-time students								
YOU	127	58	20	63	105	76	252	65
YOUR PROFESSORS	120	55	19	59	106	77	245	63
Part-time students								
YOU	51	68	52	32	80	49	183	66
YOUR PROFESSORS	46	60	47	29	66	41	159	40

* This is not necessarily a thesis requirement, but probably is in a majority of cases.

** More detailed information appears in appendices III-8 and III-9.

The significance for current and future research of enrolment in degrees requiring research can easily be demonstrated. Table III-12A deals with this.

TABLE III-12A

RESEARCH REQUIREMENT FOR DEGREE BEING PURSUED RELATED TO PLANS TO CARRY OUT RESEARCH AFTER GRADUATION AND TO WORKING WITH OTHER RESEARCHERS AS ASSISTANT

RESEARCH REQUIREMENT FOR DEGREE	WORK AS ASSISTANT*		PLANS TO CARRY OUT RESEARCH AFTER GRAD.	
YES	30%	$p < .001$	68%	$p < .001$
NO	11%		33%	

* With other scientific personnel in research activities.

Table III-12A demonstrates that students whose graduate degrees in education require research are significantly more likely to plan to carry out research after graduation, and to be working as an assistant for other researchers, than students whose degrees do not require research.

Contact with researchers during training is probably an important part of a research "apprenticeship" for students. Table III-13 indicates the degree of personal contact that the respondents have with a faculty member.

TABLE III-13

Q. 11 Do you have, in this academic year, any regular personal contact with a particular member of the Faculty of Education on a one-to-one basis in relation to research work?

Q. 12 If "NO", do you ever have such regular personal contact with a faculty member within a group, or team, of no more than five students?

	UNIVERSITIES			
ONE-TO-ONE	A	B	C	TOTAL
Full-time students	43%	56%	77%	56%
Part-time students	36	25	10	21
SMALL GROUP				
Full-time students	23	22	12	19
Part-time students	18	16	22	19

Regardless of universities, part-time students have far less contact on a one-to-one basis with professors than full-time students. This is particularly marked at University C, where it drops from 77 per cent for full-time students, to 10 per cent for part-time students, whereas there is almost no difference in the contact of the two student groups at University A, the drop being simply 7 points from 43 per cent to 36 per cent.

This is consistent with differences already noted in the programs at these two universities where little distinction is made between full-time and part-time students at A, and very great distinctions between full and part-time at C.[5] University B occupies a somewhat intermediate position in this regard, but still has a marked tendency to favour the full-time student with a higher degree of professor-student contact.

The importance of contact with professors for the present and future research activity of students is dealt with in Table III-13A.

TABLE III-13A

STUDENT CONTACT WITH PROFESSORS ON A ONE-TO-ONE BASIS OR SMALL GROUP BASIS RELATED TO PRESENT RESEARCH, AND PLANS TO CARRY OUT RESEARCH AFTER GRADUATION

CONTACT ON A ONE-TO-ONE BASIS		RESEARCH PROJECTS UNDER WAY		PLANS TO CARRY OUT RESEARCH AFTER GRAD.	
	YES	73%	$p < .001$	76%	$p < .001$
	NO	23%		47%	
CONTACT ON A SMALL GROUP BASIS					
	YES	21%	$p < .05$	57%	$p < .01$
	NO	14%		43%	

It is clear from the figures in Table III-13A that the relationship between contact with professors, especially on a one-to-one basis, and research activities of students is significant and strong. Those students with one-to-one contact are about three times as likely to have research projects under way as those without. Whether this contact is the cause of the research, or arises because of the responsibility of the professor to help someone whose program requires research, cannot be determined by the analysis in Table III-13A. But it is certain that whatever the reason, students with one-to-one contact are much more likely (76 per cent as compared to 47 per cent) to be planning to carry out research in the future.

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[5] See p.10.

Contact on a small group basis in also significantly related to student research activities and plans, but not so markedly as contact on a one-to-one basis.

Courses Being Taken

Another set of factors related to research activities of students would undoubtedly be the pattern of courses required. This is examined to some extent in Table III-14.

This table shows that Descriptive Statistics is taken by a majority of the students, regardless of university. The fact that there is none whose claim is "optional, but selected" among full-time students at University B, suggests that for these students the courses are not optional; and the same can be said with regard to part-time respondents at University A.

It is interesting to note that the fact that a higher proportion of full-time students than of part-time students report research-oriented courses as being compulsory for their degrees, is true at all universities. Again, the figures in Table III-14 lead one to believe that full-time students are much more likely than part-time students to have a research commitment, especially at University C.

TABLE III-14

Q. 13 We wish to know something about the courses listed below. Check if they are compulsory for your degree. If they are optional, and you are taking them, or plan to, please indicate that also.

COURSES	UNIVERSITIES							
	A		B		C		TOTAL	
Full-time students	N	%	N	%	N	%	N	%
DESCRIPTIVE STATISTICS								
Compulsory	166	75	27	84	96	70	289	74
Optional but selected	9	4	0	0	7	5	16	4
INFERENTIAL STATISTICS								
Compulsory	100	45	16	50	73	53	189	49
Optional but selected	8	4	0	0	7	5	15	4
RESEARCH DESIGN & METHODOLOGY								
Compulsory	87	40	21	66	92	67	200	51
Optional but selected	18	8	0	0	9	7	27	7
Number of Respondents	220		32		137		389	
Part-time students								
DESCRIPTIVE STATISTICS								
Compulsory	35	46	132	80	84	52	251	62
Optional but selected	0	0	6	4	8	5	14	3
INFERENTIAL STATISTICS								
Compulsory	20	26	66	40	47	29	133	33
Optional but selected	0	0	3	2	13	8	16	4
RESEARCH DESIGN & METHODOLOGY								
Compulsory	28	37	65	39	63	39	156	39
Optional but selected	3	4	6	4	26	16	35	9
Number of Respondents	76		165		162		403	

Teaching and Research Assistantships

Although the next table deals with financial assistance received by the student respondents, it gives information on teaching and research activities and for that reason is included here. The complete table of which Table III-15 is a part, appears as Table III-24.

TABLE III-15

Q. 18 Do you obtain financial assistance in any of the following forms?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
TEACHING ASSISTANTSHIP								
Full-time students	10	5	10	31	12	9	32	8
Part-time students	8	11	5	3	12	7	25	6
RESEARCH ASSISTANTSHIP								
Full-time students	11	5	5	16	13	9	29	7
Part-time students	3	4	1	1	2	1	6	1
Number of full-time students	220		32		137		389	
Number of part-time students	76		165		162		403	

Teacher assistantships take up time on the part of only 8 per cent of the students overall; however, at University B, almost a third of the full-time students have teaching responsibilities, and this figure is considerably higher than at the other two universities. Also, the per cent of full-time students at University B holding research assistantships is higher than at University C and especially University A, but the total is large neither for those students (16 per cent) nor for students at the three universities as a whole group (7 per cent).

Table III-15A examines the relationship between having a research assistantship and present and future research activity.

As is clear from the per cents in Table III-15A, those students who hold research assistantships are much more likely than those who do not to be pursuing research, or to be planning to carry out research after graduation. The differences are large, and statistically significant. This is consistent with our earlier finding that those who have contact on a one-to-one basis with professors - and this is usually the case with research assistants - are more likely to be involved in research activities than those who do not.

TABLE III-15A

HAVING A RESEARCH ASSISTANTSHIP RELATED TO PLANS TO CARRY OUT RESEARCH AFTER GRADUATION AND HAVING RESEARCH PROJECTS UNDER WAY

HAVING A RESEARCH ASSISTANTSHIP	HAVING RESEARCH PROJECTS UNDERWAY	PLANNING TO CARRY OUT RESEARCH AFTER GRADUATION
YES	59%	92%
	$p < .001$	$p < .001$
NO	32%	61%

The research assistantship appears to be a good form of student assistance from the point of view of research activity, present and potential.

Origin of Research Projects

Table III-16 provides information as to the origin of student research projects.

For past and present research, the major origin of research projects is the student's own conception. But, particularly for past research, at University C, on-going faculty research is an important factor. Another important factor in both past and present research at University C, is that the student's research is part of a larger project.

By comparison to full-time students, the difference for part-time students is that their projects are more likely to be their own conception. This suggests that they are more likely to be left alone in the conception of their research projects, and this idea is consistent with the fact that part-time students have less contact with other researchers on a one-to-one or small-group basis than full-time students. The problem of contact with others is dealt with more fully in Table III-17.

TABLE III-16

Q. 22 We would like to know how your research project (s), if any, originated?

ORIGIN	UNIVERSITIES							
Past or Present projects	A		B		C		TOTAL	
Full or Part-time students	N	%	N	%	N	%	N	%
ENTIRELY MY OWN CONCEPTION								
Past Research								
Full-time students	17	8	10	31	24	18	51	13
Part-time students	10	13	25	15	14	9	49	12
Present Research								
Full-time students	33	15	9	28	53	39	95	24
Part-time students	14	18	20	12	17	10	51	13
IT GREW OUT OF A PARTICULAR COURSE								
Past Research								
Full-time students	19	9	5	16	13	9	37	10
Part-time students	10	13	10	6	14	9	34	8
Present Research								
Full-time students	23	10	5	16	13	9	41	11
Part-time students	7	9	13	8	8	5	28	7
IT IS SOMEWHAT RELATED TO ONGOING RESEARCH IN MY FACULTY								
Past Research								
Full-time students	14	6	0	0	30	22	44	11
Part-time students	6	8	5	3	9	6	20	5
Present Research								
Full-time students	20	9	3	9	28	20	51	13
Part-time students	9	12	6	4	7	4	22	5
IT IS ACTUALLY A PART OF A LARGER RESEARCH PROJECT								
Past Research								
Full-time students	10	5	0	0	27	20	37	10
Part-time students	5	7	5	3	9	6	19	5
Present Research								
Full-time students	14	6	4	13	35	26	53	14
Part-time students	6	8	2	1	9	6	17	4
OTHER								
Past Research								
Full-time students	7	3	2	6	5	4	14	4
Part-time students	2	3	4	2	2	1	8	2
Present Research								
Full-time students	10	5	2	6	16	12	28	7
Part-time students	5	7	9	5	7	4	21	5
Number of full-time respondents	220		32		137		389	
Number of part-time respondents	76		165		162		403	

TABLE III-17

Q. 46 In this academic year to what extent have you worked together with other scientific personnel in your research activities?

	UNIVERSITIES							
	A		B		C		TOTAL	
PEOPLE YOU WORK WITH:	N	%	N	%	N	%	N	%
a) RESEARCHERS IN OTHER ORGANIZATIONS								
Often*	5	2	2	6	10	7	17	4
Seldom	8	4	1	3	21	15	30	8
Never & no response	207	94	29	91	106	77	342	88
b) PROFESSORS IN YOUR FACULTY								
Often	58	26	22	69	71	52	151	39
Seldom	31	14	4	13	29	21	64	16
Never & no response	131	60	6	19	37	27	174	45
c) RESEARCH ASSISTANTS (NOT STUDENTS)								
Often	26	12	5	16	32	23	63	16
Seldom	16	7	0	0	17	12	33	8
Never & no response	178	81	27	84	88	64	293	75
d) RESEARCH ASSISTANTS (STUDENTS)								
Often	28	13	5	16	41	30	74	19
Seldom	19	9	4	13	18	13	41	11
Never & no response	173	79	23	72	78	57	274	70
e) STUDENT AIDES								
Often	32	15	2	6	32	23	66	17
Seldom	18	8	1	3	16	12	35	9
Never & no response	170	77	29	91	89	65	288	74
f) CONSULTANT								
Often	23	10	5	16	23	17	51	13
Seldom	6	3	0	0	18	13	24	6
Never & no response	191	87	27	84	96	70	314	81
g) OTHER								
Often	2	1	2	6	3	2	7	2
Seldom	1	0	0	0	0	0	1	0
Never & no response	217	99	30	94	134	98	381	98
PEOPLE YOU WORK FOR:								
h) AS CONSULTANT								
Often	9	4	1	3	17	12	27	7
Seldom	4	2	0	0	13	9	17	4
Never & no response	207	94	31	97	107	78	345	89
i) AS ASSISTANT								
Often	13	6	3	9	16	12	32	8
Seldom	6	3	3	9	8	6	17	4
Never & no response	201	91	26	81	113	82	340	87
j) OTHER								
Often	3	1	0	0	4	3	7	2
Seldom	0	0	0	0	1	1	1	0
Never & no response	217	99	32	100	132	96	381	98
Number of Respondents	220		32		137		389	

* "Often" includes both "often" and "very often" responses.

The major finding suggested by the data in Table III-17 is that the majority do not work with other researchers, research assistants, student research assistants, student aides or consultants. Only with "professors in your own faculty" is there a majority, and then less than two fifths of full-time students do so often; the per cent at University B is high - over 69 per cent work often with professors in their own faculty - but since there are only 32 full-time students, the absolute number is small (about 20). Students at University C seem to work with one another as research assistants more often than at the other two universities, but for the three universities taken together, those who work with research assistants only amount to 30 per cent of respondents. Student aides appear to be less important at University B than at Universities A and C.

It is clear that a majority of respondents do not work for others in any capacity.

ATTITUDES RELATED TO RESEARCH

Attitude to Distinction in Academic and Research Degrees

A question was directed to obtaining information concerning the attitudes of students toward a dual system of degrees. Table III-18 presents this.

TABLE III-18

Q. 30 There is controversy as to the relative merits of (a) a graduate degree devoted to promoting professional competence in a specialized area such as administration, guidance, or teaching methods, and not requiring original research resulting in a thesis; and (b) a graduate degree in which original research is a requirement, and training is given which leads to the production of original research and a thesis.

Are you in favour, for your university, of a system of degrees in education which reflects the distinction between the two types of training defined above?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	130	59	26	81	93	68	249	64
NO	69	31	5	16	29	21	103	26
TOTAL	199	90	31	97	122	89	352	90

Table III-18 shows that a majority, regardless of the university, are in favour of making a distinction between research and professional degrees.

Question 30 included an opportunity to make comments and we have summarized these comments for all six universities in the Appendix III-10. The pattern we observe is similar to that given in Table III-18, that is that those in favour outnumber those against, by a proportion of almost two to one.

Just over half of the respondents make comments; these indicate that the distinction between the degrees can be the basis for controversy; those who say YES are likely to say that the distinction is useful and provides for choice according to aptitudes and interests of the students; those who say NO feel that both types of training are complementary and must be coordinated, and that therefore making the distinction is harmful. About a quarter of those who say YES, add: "provided only that there is no danger of discrimination against one type of degrees". Some of those who say NO indicate that they are against the distinction, because discrimination takes place. Finally, a very small proportion, about 4 per cent, of those who say YES, indicate their belief that a research degree should be considered superior.

Reasons for Pursuing a Graduate Degree in Education

To determine the relative importance of an interest in research skills as a motive for undertaking graduate study, we asked students for the reasons behind their decisions. These are presented in Table III-19.

On the whole, regardless of university, graduate training in education seems to be a matter of preparation for chosen career, a majority at each university selecting this item. The only striking feature is that at University B fully three quarters of the respondents give as a reason for going to graduate school, the opinion that it will lead to professional advancement; this does not seem to be the case at University A and especially at University C. On the other hand, it also seems clear that the desire to acquire research skills is not as common a motive at University B as elsewhere, especially at University C.

TABLE III-19

Q. 14 We wish to know why you decided to attend a graduate school in education. If one or more of the following is your reason(s), please check. If there are other reasons, please list them below.

REASONS	UNIVERSITIES							
Students	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) I WISHED TO TEACH OR DO RESEARCH AT THE UNIVERSITY LEVEL								
Full-time	66	30	15	47	49	36	130	33
Part-time	37	49	42	25	37	23	116	29
b) I FELT IT WOULD LEAD TO PROFESIONAL ADVANCEMENT								
Full-time	108	49	24	75	52	38	184	47
Part-time	49	64	134	81	113	70	296	73
c) I WISHED TO ACQUIRE RESEARCH SKILLS								
Full-time	109	50	11	34	79	58	199	51
Part-time	42	55	52	32	98	60	192	48
d) I FELT THE NEED FOR MORE PREPARATION BEFORE ENTERING MY CHOSEN CAREER								
Full-time	169	77	24	75	93	68	286	74
Part-time	50	66	82	50	101	62	233	58
e) I WISHED TO BECOME AN ADMINISTRATOR								
Full-time	24	11	1	3	19	14	44	11
Part-time	18	24	44	27	87	54	149	37
f) OTHER								
Full-time	42	19	3	9	38	28	83	21
Part-time	7	9	41	25	21	13	69	17
Number of full-time respondents	220		32		137		389	
Number of part-time respondents	76		165		162		403	

Q. 14 Give the two that you consider to be the most important in your case.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
1st I FELT THE NEED FOR MORE PREPARATION BEFORE ENTERING MY CHOSEN CAREER								
Full-time	94	43	15	47	55	40	164	42
Part-time	33	43	32	19	45	28	110	27
2nd I WISHED TO ACQUIRE RESEARCH SKILLS								
Full-time	42	19	3	9	41	30	86	22
2nd I FELT IT WOULD LEAD TO PROFESSIONAL ADVANCEMENT								
Part-time	16	21	50	30	35	22	101	25

To some extent, this interest in professional advancement may be related to the fact that students at University B are older and have more chances to be in line for promotion, simply because of the extent of their experience.

It is probable that the reasons for undertaking graduate training at University B are somewhat different from those at Universities A and C. Part-time students at Universities A and C, however, are more likely to resemble those students at University B than full-time students, in that a majority of them are also giving the reason "leading to professional advancement" as an important one for going into graduate school. This is consistent with the previous finding that the part-time students at all three universities are older than the full-time students at Universities A and C.

When asked to select the most important reason for going to graduate school, both full-time and part-time students give the need for preparation as the first choice, but as for second choice, the full-time students, particularly at Universities A and C, give the desire to acquire research skills, whereas part-time students in all universities give professional advancement as their second most important reason. It is likely that the functions of graduate education are somewhat different for full-time students and for part-time students.

Teaching and Research Requirements

We have already dealt with the attitude of students themselves and their professors, concerning the importance of research requirement for the graduate degrees. A majority of both groups as a whole consider it extremely or very important. For details, refer to Table III-12, p.20.

To get one impression of the students' research orientations, we asked them about the research and teaching aspect of the professors' role. Table III-20 shows the responses.

TABLE III-20

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Q. 28 In your opinion, should all faculty members be required to do at least some teaching?								
YES	167	76	18	56	88	64	273	70
NO	40	18	12	38	37	27	89	23
TOTAL	207	94	30	94	125	91	362	93
Q. 29 In your opinion, should all faculty members be required to do at least some research?								
YES	167	76	15	47	99	72	281	72
NO	39	18	16	50	34	25	89	23
TOTAL	206	94	31	97	133	97	370	95

Comparing universities to each other on Table III-20, we see that the students at University B are less likely than at other universities to believe that all faculty members should do at least some teaching. This is unusual in view of the fact that the commitment to teaching of University B is considerably higher than that at Universities A and C. Taking all universities together, we observe that more than two thirds (70 per cent) feel that faculty members should do at least some teaching.

Compared to those at the other universities, students at University B again respond differently on question 29; fewer than half feel that every faculty member should be required to do at least some research as compared to about three quarters at Universities A and C. Students at University B appear more oriented to specialized roles, as they do not necessarily feel that every faculty member should do research and teaching.

An attempt was made to determine whether the attitudes of students toward research and teaching as part of the professor's role is related to other attitudes about research. The findings are presented in Table III-20A.

TABLE III-20A

ATTITUDES ABOUT THE TEACHING AND RESEARCH ROLE OF THE PROFESSORS RELATED TO RESEARCH AS PART OF THE TEACHER'S ROLE, AND THE VALUE OF EDUCATIONAL RESEARCH TO THE TEACHER

ALL FACULTY MEMBERS SHOULD DO SOME RESEARCH	INVOLVEMENT OF CLASS TEACHERS IN CONCEPTION AND CONDUCT OF RESEARCH		FINDINGS OF EDUC. RES. GENERALLY OF LITTLE HELP TO THE CLASS ROOM TEACHER	
YES	46%	$p< .001$	64%	n.s.
NO	26%		60%	
ALL FACULTY MEMBERS SHOULD DO SOME TEACHING				
YES	43%	$p< .01$	49%	$p< .01$
NO	30%		37%	

Table III-20A shows that attitudes toward the involvement of professors in research and teaching are related to beliefs about the extent to which teachers should be involved in research.

Respondents who feel that all faculty members should do some research are significantly more likely (46 per cent as compared to 26 per cent) to believe that classroom teachers should be involved in the conception and conduct of research than those who do not feel that research should be mandatory for professors. This suggests that those who think that research should be a specialty on the part of only certain professors are more likely than others to feel that this specialty is not appropriate to classroom teachers.

Another interesting result evident in Table III-20A is that those who think that all professors should do some teaching (i.e., that none should specialize in research exclusively) are less likely than others to believe that the findings of educational research are useful to class-room teachers; in other words, they are less research-oriented.

Further information on the appropriateness of research to the roles associated with several positions is presented in Table III-21.

TABLE III-21

Q. 37 Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?

	UNIVERSITIES							
	A		B		C		TOTAL	
Degree of involvement	N	%	N	%	N	%	N	%
a) CLASS TEACHERS								
Very heavy	21	10	2	6	9	7	32	8
Heavy	74	34	7	22	48	35	129	33
Moderate	100	45	20	63	58	42	178	46
None	5	2	1	3	9	7	15	4
Total	200	91	30	94	124	91	354	91
b) SCHOOL ADMINISTRATORS								
Very heavy	16	7	4	13	8	6	28	7
Heavy	50	23	10	31	43	31	103	26
Moderate	82	37	9	28	44	32	135	35
None	30	14	2	6	24	18	56	14
Total	178	81	25	78	119	87	322	83
c) PROFESSORS INVOLVED IN TEACHER EDUCATION								
Very heavy	88	40	16	50	62	45	166	43
Heavy	99	45	8	25	49	36	156	40
Moderate	12	5	7	22	14	10	33	8
None	1	0	0	0	3	2	4	1
Total	200	91	31	97	128	93	359	92
d) PROFESSIONAL EDUCATIONAL RESEARCHERS IN FACULTIES OF EDUCATION								
Very heavy	173	79	24	75	119	87	316	81
Heavy	25	11	7	22	11	8	43	11
Moderate	4	2	0	0	1	1	5	1
None	1	0	0	0	1	1	2	1
Total	203	92	31	97	132	96	366	94
e) BEHAVIORAL SCIENTISTS IN FACULTIES OF EDUCATION								
Very heavy	125	57	19	59	97	71	241	62
Heavy	56	25	7	22	27	20	90	23
Moderate	9	4	5	16	6	4	20	5
None	3	1	0	0	1	1	4	1
Total	193	88	31	97	131	96	355	91
f) BEHAVIORAL SCIENTISTS IN OTHER FACULTIES								
Very heavy	72	33	6	19	57	42	135	35
Heavy	72	33	9	28	55	40	136	35
Moderate	36	16	12	38	13	9	61	16
None	7	3	1	3	0	0	8	2
Total	187	85	28	88	125	91	340	87

There is general agreement among students of universities that educational researchers in faculties of education, behavioral scientists in faculties of education and professors involved with teacher education should all take part in the conception and conduct of research.

Students at University B seem to be somewhat less in favour of the involvement of class-room teachers in research than those at Universities A and C. However, they are more inclined to believe that school administrators should be heavily or very heavily involved than students at either of the two other universities.

Regarding behavioral scientists in other faculties, students at University C seem to favour heavy and very heavy involvement more than those at the other two universities, with University A taking the intermediate position in this issue.

FACTORS RELATED TO THE UNDERTAKING OF RESEARCH

Factors Influencing the Choice of Research Problems

TABLE III-22

Q. 21 Have the following factors tended to influence your choice of research problems to date?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) Past experience not related to profession or training	47	21	4	13	52	38	103	26
b) Training and ability	95	43	21	66	106	77	222	57
c) Preoccupations of your department or faculty	58	26	10	31	55	40	123	31
d) Availability of funds	15	7	4	13	20	15	39	10
e) Current educational problems	65	30	17	53	59	43	141	36
f) Problems related to content field you are teaching	41	19	11	34	13	9	65	17
h) Problems related to faculty-student relations	29	13	11	34	35	26	75	19
i) Other	21	10	4	13	41	30	66	17
Number of Respondents	220		32		137		389	

For students at all three universities, the major factors related to the selection of research problems has been "Training and ability", followed by "Current educational problems". Other determinants of choice have been "Problems related to faculty-student relations" [6] and "Preoccupations of department or faculty". There are no striking differences between universities, in this regard.

TABLE III-23

Q. 23 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	146	66	15	47	88	64	249	64
NO	30	14	13	41	33	24	76	20
NO RESPONSE	44	20	4	13	16	12	64	16

Table III-23 shows that almost two thirds of the student respondents agree that a priority list would influence their choice of research topics, whereas half of the faculty respondents (see p.111, Ch. II) reply in this direction. As in the case of the professors, a smaller proportion of respondents at University B than at Universities A and C, answer "YES".

Respondents were also given an opportunity to write in comments to qualify their response to question 23.

For all six universities, of those who said YES and also made comments, 37 per cent modify their positive response by saying "Provided it would correspond to my field of interest or competence". Further, about 25 per cent are positive without conditions, but add remarks such as "It would be a very good initiative", or "it would help us to make our research more useful and less theoretical because we would be working within a general plan". Those responding negatively and offering comments are about 5 per cent of all possible respondents. The most frequent comment is "my field of interest is already determined". Other negative comments indicate suspiscion or lack of confidence that such a list would not be biased. In summary, a majority are in favour of a list, both of the respondents at the three universities and those making comments from all six universities. Detailed information appears in Appendix III-11.

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[6] The French questionnaire read: "... relations entre maître et élève", which refers rather to elementary and secondary education.

Financial Assistance

The next table deals with financial assistance received by the student respondents.

TABLE III-24

Q. 18 Do you obtain financial assistance in any of the following forms?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
TEACHING ASSISTANSHIP								
Full-time students	10	5	10	31	12	9	32	8
Part-time students	8	11	5	3	12	7	25	6
RESEARCH ASSISTANTSHIP								
Full-time students	11	5	5	16	13	9	29	7
Part-time students	3	4	1	1	2	1	6	1
SCHOLARSHIP (NON REPAYABLE)								
Full-time students	57	26	6	19	53	39	116	30
Part-time students	2	3	7	4	12	7	21	5
BURSARY (REPAYABLE AT LEAST IN PART)								
Full-time students	103	47	3	9	26	19	132	34
Part-time students	0	0	6	4	2	1	8	2
RESEARCH GRANT TO SELF								
Full-time students	0	0	1	3	3	2	4	1
Part-time students	0	0	3	2	1	1	4	1
RESEARCH GRANT TO A FACULTY MEMBER								
Full-time students	7	3	4	13	3	2	14	4
Part-time students	1	1	3	2	2	1	6	1
OTHER								
Full-time students	11	5	6	19	10	7	27	7
Part-time students	13	17	17	11	17	10	47	13
Number of full-time respondents	220		32		137		389	
Number of part-time respondents	76		165		162		403	

Table III-24 makes it clear that scholarships and bursaries are the dominant form of financial assistance for all students, especially at Universities A and C. Sixty four per cent of the full-time students report one or other of these forms of support; but the distribution of scholarships and bursaries is exceptionally uneven at the three universities. It appears that the teaching assistantship as well as research assistantship are an important means of financial support only at University B.

There are so few part-time students receiving any form of assistance that it makes little sense to attempt comparisons between universities. What comes out really clearly is that part-time students are not likely anywhere to obtain much support financially.

Information as to amounts (in dollars) of support given in the various categories appears in Appendix III-12.

Table III-15 A (see p. 26) shows that the relationship between having a research assistantship, and present and future research activity,is positive and significant.

Financial Needs and Funds for Research

TABLE III-25

Q. 38 Are there financial needs in your research activities which are not being supported by grants?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	46	21	5	16	62	45	113	29
NO	87	40	19	59	48	35	154	40
NO RESPONSE	87	40	8	25	27	20	122	31
Number of Respondents	220		32		137		389	

Students at University C reveal a level of financial need two to three times that of the other universities, and earlier comments in Chapter II indicate that there is less orientation towards research at that university. It might appear that a cause-effect relationship exists here.

We have already observed the opposite for faculty in Chapter II, and the analysis, presented in Table III-25A below, of the relationship between research activities and financial needs in the case of students,also rejects this hypothesis.

TABLE III-25A

FINANCIAL NEEDS RELATED TO RESEARCH ACTIVITY AND FUTURE PLANS FOR RESEARCH

FINANCIAL NEEDS	RESEARCH PROJECTS UNDER WAY	PLANS FOR FUTURE RESEARCH
YES	62%	76%
	p< .001	p< .001
	29%	57%

The data suggest that those with financial needs not being met by grants tend to be those who are currently involved in research, and those who plan to do research in the future.

We were also interested in the extent to which students had attempted to meet their needs through applying for research grants. Table III-26 provides information about this.

TABLE III-26

Q. 39 In searching out funds for research, have you made formal applications in the last two years? If YES, to what extent were you successful? To whom did you apply?

	UNIVERSITIES							
	A		B		C		TOTAL	
APPLICATIONS MADE	N	%	N	%	N	%	N	%
YES	34	15	7	22	61	45	102	26
PROPORTION OF REQUESTED AMOUNT ACTUALLY RECEIVED								
1 - 49%	0	0	1	3	3	2	4	1
50 - 97%	4	2	0	0	7	5	11	3
98 -100%	5	2	0	0	17	12	22	6
TOTAL	9	4	1	3	27	19	37	10
SOURCES OF FUNDS								
DEPARTMENT OF EDUCATION (QUEBEC)	16	7	1	3	29	21	46	12
CANADA COUNCIL	1	0	3	9	15	11	19	5
NATIONAL RESEARCH COUNCIL	1	0	0	0	8	6	9	2
GOVERNMENT OF QUEBEC	2	1	4	13	1	1	7	2
I.R.E.	1	0	0	0	3	2	4	1
Number of Respondents	220		32		137		389	

According to Table III-26, the students at University C are twice as likely as students at University B and about three times as likely as students at University A, to have made formal application for research funds. On the whole, about a quarter of the respondents have made a formal application for research funds. However, only some ten per cent have actually received varying proportions of the amounts they had requested. Students at University C have been much more successful in obtaining grants than those elsewhere, which may help to account for the fact that they seem more likely to apply for grants.

Perhaps experience in applying for grants during student years (learning the art of "grantsmanship") should be an important part of a research apprenticeship. The data in Table III-26A, which relates applying for grants to present and future research activities, support this view.

TABLE III-26A

HAVING MADE APPLICATIONS FOR FUNDS RELATED TO PRESENT AND FUTURE RESEARCH ACTIVITIES

HAVE MADE FORMAL APPLICATIONS FOR FUNDS	RESEARCH PROJECTS UNDER WAY	PLAN TO CARRY OUT RESEARCH
YES	61%	78%
	$p < .001$	$p < .001$
NO	28%	59%

Those who have made formal applications for funds are more likely to have research projects under way (despite the fact already observed that most did not actually receive the funds) and are more likely to plan research in the future, than those who have not made such applications.

KINDS OF RESEARCH BEING UNDERTAKEN

Data Gathering Methods Used

Table III-27 presents information on data gathering methods used by full-time students at the three universities.

TABLE III-27

Q. 26 What data gathering methods do you use?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PARTICIPANT OBSERVATION								
Present Research	10	5	8	25	16	12	34	9
Past Projects	6	3	1	3	13	9	20	5
NON-PARTICIPANT OBSERVATION								
Present Research	2	1	2	6	14	10	18	5
Past Projects	4	2	1	3	6	4	11	3
INTERVIEW								
Present Research	24	11	10	31	30	22	64	16
Past Projects	12	5	5	16	20	15	37	10
QUESTIONNAIRE								
Present Research	26	12	14	44	57	42	97	25
Past Projects	22	10	6	19	31	23	59	15
BIBLIOGRAPHIC								
Present Research	24	11	4	13	16	12	44	11
Past Projects	13	6	2	6	14	10	29	7
CONTENT ANALYSIS								
Present Research	22	10	6	19	26	19	54	14
Past Projects	15	7	3	9	16	12	34	9
EXPERIMENTAL								
Present Research	22	10	2	6	45	33	69	18
Past Projects	12	5	3	9	43	31	58	15
AVAILABLE DATA								
Present Research	20	9	10	31	22	16	52	13
Past Projects	6	3	3	9	20	15	29	7
STANDARDIZED TESTS								
Present Research	14	6	5	16	40	29	59	15
Past Projects	11	5	4	13	31	23	46	12
OTHERS								
Present Research	5	2	2	6	8	6	15	4
Past Projects	1	0	1	3	4	3	6	2
Number of Respondents	220		32		137		389	

About one quarter of the full-time respondents used the questionnaire method which is the most popular approach for student researchers, regardless of university. Other important methods are experimental (especially at University C), and interview (especially at University B). There seems to be quite large differences by university in the methods used.

Data Analysis

Analytic methods are outlined in Table III-28.

TABLE III-28

Q. 27 What are your analytic approaches?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
HISTORICAL								
Present Research	22	10	7	22	7	5	36	9
Past Projects	13	6	2	6	10	7	25	6
COMPARATIVE								
Present Research	26	12	10	31	35	26	71	18
Past Projects	16	7	4	13	23	17	43	11
LOGICAL								
Present Research	20	9	6	19	18	13	44	11
Past Projects	12	5	4	13	9	7	25	6
THEORETICAL								
Present Research	25	11	5	16	30	22	60	15
Past Projects	10	5	3	9	22	16	35	9
STATISTICAL (DESCRIPTIVE)								
Present Research	44	20	14	44	77	56	135	35
Past Projects	29	13	7	22	66	48	102	26
STATISTICAL (INFERENTIAL)								
Present Research	27	12	7	22	46	34	80	21
Past Projects	16	7	3	9	40	29	59	15
OTHERS								
Present Research	2	1	0	0	10	7	12	3
Past Projects	2	1	0	0	2	3	4	1
Number of Respondents	220		32		137		389	

On the whole, the major method of data analysis across universities is descriptive statistics, with inferential statistics coming second. The emphasis on the descriptive statistics is undoubtedly related to the analysis of surveys conducted through questionnaires, interviews, tests, and observation. This descriptive level of research is probably quite appropriate to the Master's level, which accounts for most of the work undertaken by students.

Populations Studied

Table III-29 shows the populations used by students for the collection of data.

TABLE III-29

Q. 25 From what population(s) are you drawing your data for your research?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
PARENTS								
Present Research	13	6	3	9	14	10	30	8
Past Projects	6	3	0	0	5	4	11	3
TEACHERS								
Present Research	12	5	10	31	22	16	44	11
Past Projects	10	5	2	6	13	9	25	6
ADMINISTRATORS								
Present Research	11	5	4	13	16	12	31	8
Past Projects	3	1	2	6	12	9	17	4
PRESCHOOL CHILDREN								
Present Research	6	3	1	3	12	9	19	5
Past Projects	4	2	0	0	9	7	13	3
GRADES 1-3 (PRIMARY) PUPILS								
Present Research	9	4	1	3	22	16	32	8
Past Projects	4	1	0	0	16	12	20	5
GRADES 4-6 (ELEMENTARY) PUPILS								
Present Research	13	6	3	9	10	7	26	7
Past Projects	10	5	1	3	8	6	19	5
GRADES 7-11 (SECONDARY) PUPILS								
Present Research	15	7	10	31	18	13	43	11
Past Projects	22	10	3	9	13	9	38	10
CEGEP STUDENTS								
Present Research	10	5	0	0	12	9	22	6
Past Projects	6	3	0	0	13	9	19	5
POST-SECONDARY STUDENTS								
Present Research	2	1	1	3	6	4	9	2
Past Projects	1	0	0	0	5	4	6	2
UNIVERSITY STUDENTS								
Present Research	10	5	1	3	13	9	24	6
Past Projects	9	4	6	19	21	15	36	9
SCHOOL BOARD MEMBERS								
Present Research	0	0	2	6	3	2	5	1
Past Projects	0	0	0	0	2	1	2	1
UNIVERSITY PERSONNEL								
Present Research	11	5	1	3	5	4	17	4
Past Projects	5	2	1	3	4	3	10	3
OTHERS								
Present Research	12	5	2	6	24	18	38	10
Past Projects	6	3	0	0	12	9	18	5
Number of Respondents	220		32		137		389	

In Table III-29 the data indicate that teachers and secondary school students are the major source of data for graduate students doing research. Students at University B tend to use these much more than students at Universities A and C, and this is probably related to the high frequency of teaching experience among respondents there.

On the whole, a very broad spectrum of population resources are used for data gathering by students, signifying an interest in many aspects of educational research.

INTERACTION AND ATTITUDES TOWARD INTERACTION

We have already dealt with the question of working with other scientific personnel in the section Current Activities. The data from which we drew our conclusions are in Table III-17; our major finding was that with the exception of contacts with their own professors, students were involved very little in interaction with other scientific personnel.

Table III-30 shows the opinions of our respondents concerning their relationship with other faculties or departments in the university.

TABLE III-30

Q. 35 To what extent should other departments and faculties be involved with graduate students pursuing research degrees in education?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
In evaluating them for the degree	65	30	7	22	59	43	131	34
To the extent of supervising them in their research when pertinent	110	50	22	69	71	52	203	52
To the extent of providing part of their training	179	81	25	78	113	82	317	81
Not at all	7	3	0	0	3	2	10	3
Other	17	8	1	3	12	8	30	7
Number of Respondents	220		32		137		389	

From Table III-30, it is evident that a majority of respondents at every university favour foremost the idea that other departments and faculties should be involved with graduate students pursuing research degrees in education to the extent of providing part of their training. A majority also feel that those professors should supervise their research when it is pertinent. The total picture indicates a rather overwhelming support for the multidisciplinary approach in training these students with only three per cent of respondents overall being opposed.

The respondents are quite evenly divided in regard to this item: "to the extent of supervising them in their research when pertinent"; this fact makes the item a good one to relate favourability to interaction to research activities, which is done in Table III-30A.

TABLE III-30A

HAVING RESEARCH UNDER WAY RELATED TO ATTITUDE TO INTERACTION WITH OTHER DEPARTMENTS AND FACULTIES

HAVING RESEARCH PROJECTS UNDER WAY	FAVOURABLE TO INVOLVEMENT OF OTHER DEPARTMENTS IN SUPERVISING STUDENTS IN RESEARCH	
YES	58%	$p < .001$
NO	48%	

The data in Table III-30A support the notion that those who have research activities under way are significantly more likely to favour the involvement of other departments and faculties to the extent of supervising them in their research when pertinent.

PROBLEMS RELATED TO THE CONDUCT OF RESEARCH

Financial Needs

We have already shown that a substantial proportion of students have financial needs for research, especially at University C, and that those who indicate such needs are more active in research. See Tables III-25 and III-25A, pp. 39 and 40.

Needs for Equipment

Table III-31 deals with students' need for equipment.

TABLE III-31

Q. 40 Do you need any equipment not available to you for your present projects or any that you would like to carry out?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	33	15	2	6	36	26	71	18
NO	106	48	24	75	76	55	206	53
Number of Respondents	220		32		137		389	

In terms of equipment, a small proportion of students at Universities A and C appear to have needs, whereas only two respondents in University B express a need for equipment. This may again reflect the lower priority that research has at University B by comparison to the other universities. It is noteworthy that only 71 per cent of the respondents troubled to answer this question; equipment is apparently not a pressing need.

Availability of Bibliographic Resources

Table III-32 summarizes the comparison of student respondents concerning the availability of bibliographic resources.

Students at all three universities agree that the need for pre-publication information about on-going research is a most pressing one. In addition, final research reports, microfilms, microfiches, and abstracts are in poor availability. Current journals and bound periodicals are in fairly satisfactory supply. That is on the basis of the locally available resources. The same general view prevails about outside sources: shortage of on-going research pre-publication and abstracts, but adequacy in current journals and bound periodicals.

TABLE III-32

Q. 41 Comment on the availability of bibliographic resources relevant to your research work.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
CURRENT JOURNALS								
Locally Available								
Excellent	29	13	6	19	29	21	64	16
Adequate	62	28	17	53	63	46	142	37
Poor	14	6	5	16	23	17	42	11
No Response	115	52	4	13	22	16	141	36
Outside Sources								
Excellent	14	6	5	16	14	10	33	8
Adequate	37	17	9	28	29	21	75	19
Poor	16	7	4	13	22	16	42	11
No Response	153	70	14	44	72	53	239	61
BOUND PERIODICALS								
Locally Available								
Excellent	26	12	4	13	25	18	55	14
Adequate	58	26	17	53	62	45	137	35
Poor	20	9	4	13	29	21	53	14
No Response	116	53	7	22	21	15	144	37
Outside Sources								
Excellent	14	6	2	6	10	7	26	7
Adequate	33	15	11	34	28	20	72	19
Poor	17	8	2	6	23	17	42	11
No Response	156	71	17	53	76	55	249	64
RESEARCH REPORTS, FINAL								
Locally Available								
Excellent	14	6	4	13	15	11	33	8
Adequate	34	15	8	25	43	31	85	22
Poor	47	21	12	38	41	30	100	26
No Response	125	57	8	25	38	28	171	44
Outside Sources								
Excellent	7	3	4	13	6	4	17	4
Adequate	23	10	6	19	27	20	56	14
Poor	28	13	5	16	30	22	63	16
No Response	162	74	17	53	74	54	253	65
ON-GOING RESEARCH, PRE-PUBLICATION								
Locally Available								
Excellent	6	3	2	6	2	1	10	3
Adequate	13	6	0	0	17	12	30	8
Poor	53	24	16	50	66	48	135	35
No Response	148	67	14	44	52	38	214	55
Outside Sources								
Excellent	1	0	1	3	2	1	4	1
Adequate	12	5	2	6	8	6	22	6
Poor	36	16	11	34	42	31	89	23
No Response	171	78	18	56	85	62	274	70

TABLE III-32

Q. 41 Comment on the availability of bibliographic resources relevant to your research work.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
ABSTRACTS								
Locally Available								
Excellent	5	2	3	9	6	4	14	4
Adequate	30	14	14	44	34	25	78	20
Poor	37	17	5	16	44	32	86	22
No Response	148	67	10	31	53	39	211	54
Outside Sources								
Excellent	3	1	3	9	2	1	8	2
Adequate	19	9	9	28	11	8	39	10
Poor	24	11	4	13	36	26	64	16
No Response	174	79	16	50	88	64	278	71
MICROFICHES								
Locally Available								
Excellent	7	3	1	3	3	2	11	3
Adequate	29	13	5	16	16	12	50	13
Poor	34	15	7	22	54	39	95	24
No Response	150	68	19	59	64	47	233	60
Outside Sources								
Excellent	6	3	2	6	4	3	12	3
Adequate	21	10	4	13	17	12	42	11
Poor	17	8	4	13	30	22	51	13
No Response	176	80	22	69	86	63	284	73
MICROFILMS								
Locally Available								
Excellent	10	5	3	9	3	2	16	4
Adequate	26	12	7	22	15	11	48	12
Poor	33	15	7	22	57	42	97	25
No Response	151	69	15	47	62	45	228	59
Outside Sources								
Excellent	7	3	2	6	5	4	14	4
Adequate	21	10	6	19	15	11	42	11
Poor	19	9	5	16	30	22	54	14
No Response	173	79	19	59	87	63	279	72
OTHER								
Locally Available								
Excellent	7	3	0	0	1	1	8	2
Adequate	1	0	0	0	5	4	6	2
Poor	3	1	0	0	9	7	12	3
No Response	209	96	32	100	112	88	363	93
Outside Sources								
Excellent	2	1	0	0	0	0	2	1
Adequate	3	1	0	0	9	7	12	3
Poor	3	1	0	0	13	9	16	4
No Response	212	97	32	100	115	84	369	92

As a further check on the need for bibliographic resources in relation to incomplete research at the prepublication stage, a question on this problem was put directly to the students. The results are in Table III-33.

TABLE III-33

Q. 42 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	185	84	19	59	120	88	324	83
NO	4	2	9	28	5	4	18	5
NO RESPONSE	31	14	4	13	12	9	47	12
Number of Respondents	220		32		137		389	

As indicated by the figures on Table III-33, the vast majority of students at Universities A and C, and a smaller proportion but still a majority at University B, feel a need for information about on-going incomplete research at the pre-publication stage. This appears to be an important issue, since most students took the trouble to answer. It is interesting to note that only at University B did a considerable proportion of students indicate that they do not feel such a need; it seems likely that this results more from a disinterest in the pursuit of educational research than from a superior availability of information at University B.

Specialized Consultant Services and Personnel Available

Information provided by students about personnel and services available is presented in Table III-34.

Student responses to the question dealt with in Table III-34 indicate no really serious needs for consultant services and personnel; the critical row in each category is the "not available" row, and the only case in which more than ten per cent of the students over all indicate a need is for data bank services. The need

TABLE III-34

Q. 43 What specialized consultant services and personnel are available to you in your role as researcher?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
INFORMATION RETRIEVAL								
Available	31	14	6	19	28	20	65	17
Not available	15	7	4	13	14	10	33	8
Not necessary	17	8	8	25	34	25	59	15
No Response	157	71	14	44	61	45	232	60
DOCUMENTATION								
Available	86	39	7	22	85	62	178	46
Not available	2	1	4	13	5	4	11	3
Not necessary	6	3	7	22	8	6	21	5
No Response	126	57	14	44	39	28	179	46
DATA BANK								
Available	18	8	3	9	17	12	38	10
Not available	22	10	3	9	25	18	50	13
Not necessary	25	11	12	38	42	31	79	20
No Response	154	70	14	44	53	39	222	57
CENSUS-TYPE DATA								
Available	46	21	6	19	33	24	85	22
Not available	14	6	3	9	9	7	26	7
Not necessary	18	8	9	28	50	36	77	20
No Response	142	65	14	44	45	33	201	52
STATISTICS ADVISER								
Available	53	24	17	53	85	62	155	40
Not available	12	5	1	3	2	1	15	4
Not necessary	12	5	3	9	14	10	29	7
No Response	143	65	11	34	36	26	190	49
RESEARCH DESIGN CONSULTANT								
Available	52	24	17	53	87	64	156	40
Not available	16	7	1	3	5	4	22	6
Not necessary	9	4	4	13	10	7	23	6
No Response	143	65	10	31	35	25	188	48
COMPUTER SERVICES								
Available	53	24	11	34	66	48	130	33
Not available	11	5	5	16	10	7	26	7
Not necessary	15	7	5	16	19	14	39	10
No Response	141	64	11	34	42	31	194	50
OTHERS								
Available	5	2	0	0	3	2	8	2
Not available	1	1	0	0	0	0	1	0
Not necessary	1	1	0	0	3	2	4	1
No Response	213	97	32	100	131	96	376	97

for data bank services seems strongest at University C. Students at University B are more likely to indicate needs for computer services, documentation services, and information retrieval services than those at the other two universities. A substantially higher proportion of students at University A do not respond at all, perhaps indicating low research activity or a disinterest in research at the moment. This may be related to the youth of the respondents at University A.

Availability of Population from Which Data Are Drawn

Of critical importance to the researchers, perhaps especially the student who may not have the professional connections of the established researcher, is the accessibility of populations for purposes of obtaining data. This is dealt with in Table III-35.

TABLE III-35

Q. 44 How accessible is the population from which you would like to draw your data?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
Readily accessible	47	21	15	47	69	50	131	34
Not very accessible	20	9	4	13	29	21	53	14
Not accessible	1	1	0	0	1	1	2	1
Do not know	7	3	1	3	7	5	15	4
No Response	145	66	12	37	31	23	188	48
Number of Respondents	220		32		137		389	

The response rates in Table III-35 suggest that accessibility to population is not a serious problem; in fact, two thirds of the students at University A did not even respond to the question, and as for the students at all universities who did respond, only about one per cent reported populations not accessible. This may be related to attitudes favourable to research in schools and on the part of educators, but it may also be that since so little educational research has been done in the past, schools have not yet had time to become tired of cooperating by answering questionnaires or by taking part in experiments.

A more direct question about needs for data was asked of students, whose responses are summarized in Table III-36.

TABLE III-36

Q. 45 Are there any needs for data that are not met?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
YES	15	7	3	9	21	15	39	10
Number of Respondents	220		32		137		389	

In general, needs for data are being adequately met at all universities.

Other Problems Related to the Conduct of Research

It is not feasible to foresee in any questionnaire all the possible problems and to include them in an entirely precoded set of items. Therefore, our questionnaire ended with two opportunities for respondents to offer in a completely unstructured way, any advice which they felt might be of use to the Institute of Research in Education. The first of these questions was as follows:

> "In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions."

Forty-three per cent of all respondents of the six universities took pains to make suggestions in response to this question. Of this group, about one in four suggest that more funds be made available through such approaches as grants, research budgets for faculties, scholarships and bursaries.

Eighteen per cent of the responses indicate that there is a need for improved coordination and increased communication of information relative to educational research.

Sixteen per cent express a desire for more information on research both on-going and completed; another 12 per cent feel that steps should be taken to enable researchers to work in teams on big projects.

A frequent difficulty is the shortage of time, which is either mentioned directly, or inferred in statements indicating a desire for smaller teaching loads.

The most common category of suggestions on the part of student respondents has to do with situational factors beyond their control which they feel are detrimental to their satisfactory pursuit of research training and activities. These include conditions of thesis supervision, questions about the competence and attitudes of professors, concern for accessibility to the professors and the extremely heavy student-professor ratio.

Other responses indicate needs for more introductory courses on research and research methods, more practical training for researchers and more research apprenticeships.

Further details of these responses appear in Appendix III-13. The second of these open-ended questions was:

> "Are there any ways in which Government agencies such as Canada Council, I.R.E., could make a really telling contribution to your work as researcher? Try to indicate roughly the order of your suggestions."

Thirty-six per cent of all respondents answered this question and of the total in the six universities, 27 per cent made relevant suggestions of some kind. By far, the most frequent way respondents feel that government agencies could make a telling contribution to research is through financial assistance by means of grants, bursaries, and sabbatical leaves: two thirds of those making suggestions answer in this vein. The next most frequent requirement cited by half of the respondents is for more information; items included here are publication of research results, lists of priorities and needs for research, publication of on-going research, and information on grants and bursaries.

About twenty-eight per cent of the respondents indicate the need for technical assistance of some kind. The most frequently required type of assistance relates to documentation and information retrieval, followed by need for data bank services. In addition, respondents desire facilitation of access to their populations, consultants, secretarial help and other such services.

Communication is mentioned by sixty per cent of those making relevant suggestions. Other important topics are need for coordination and planning, and the organization of research centers by Government agencies.

Further details of their responses appear in the Appendix III-14.

TRAINING OF RESEARCHERS

Emphasis on Research and Professional Training

Table III-37 shows condiderable difference among student respondents at the three universities. At University A, more than half feel that the emphasis given to the research graduate program relative to the professional program is insufficient, and only about one quarter feel that it is sufficient or excessive. At Universities B and C, however, more than half of the responding students state that the emphasis given the research program relative to professional graduate training is sufficient or excessive.

Looking at the totals for student respondents as a whole group, there is a slight tendency to dissatisfaction with the emphasis on research graduate programs, compared with the professional graduate programs. However the pattern varies by university with a research orientation

TABLE III-37

Q. 31 In your estimate, what is the emphasis given to the research graduate program relative to the professional graduate program in your school?

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
EXCESSIVE	4	2	1	3	9	7	14	4
SUFFICIENT	49	22	19	59	66	48	134	34
INSUFFICIENT GREATLY INSUFFICIENT	118	54	7	22	44	32	169	43
Number of Respondents	220		32		137		389	

at University A, a split at University C, and less dissatisfaction on the part of students at University B. The detailed figures from which the data presented in Table III-37 are abstracted are presented in Appendix III-15.

Students were given the opportunity to react to a number of statements in relation to graduate training and research. Their responses are summarized in Table III-38 from more detailed information which is listed in Appendix III-16.

Table III-38 presents, in rank beginning with the item that elicited the highest mean agreement, a summary of attitudes on the part of the student respondents as a single group.

There are only three points of serious disagreement among the three universities as far as this list of ranked items is concerned. (These observations result from an analysis of the more detailed information which appears in Appendix III-16.) First, University A is more inclined to be undecided about the Ph.D. having a higher prestige than the Ed.D., compared to Universities B and C. Second, University A is less in agreement and more undecided than Universities B and C that the Ph.D. should be a research degree and the Ed.D. should be a professional degree. Third, University B is more inclined to disagree that "Persons who wish to make a career of educational research should receive most of their research training from professors in the behavioral sciences outside schools of eucation". Although items D and J have the same mean

TABLE III-38

AGREEMENT ON A LIST OF STATEMENTS CONCERNING EDUCATIONAL TRAINING AND RESEARCH WORK

	Item	Mean Agreement (3 Univ.)	Standard Deviation
H	Teachers should be trained to do research on instructional methods in their own classrooms, sometimes called "action research".	4.2	.77
A	Elementary school teaching is a profession, like law or engineering.	4.1	1.02
G	The Ph.D. generally has higher prestige than the Ed.D.	3.8	1.10
I	Schools or departments of education generally have low prestige within the universities.	3.7	.94
E	The research techniques and methods used in educational research tend to lag behind those used in behavioral science generally.	3.5	.94
B	The findings of educational research are generally of little help to the classroom teacher.	3.4	1.10
C	The Ph.D. should be a research degree and the Ed.D. should be a professional degree.	3.4	1.28
F	Teachers are better qualified to evaluate the results of their teaching than experts who are not in daily contact with the classroom.	3.1	1.16
D	We already know so much about the teaching-learning process that the main problem facing us is how better to disseminate this knowledge so that it is used in the schools.	2.7	1.26
J	Persons who wish to make a career of educational research should receive most of their research training from professors in the behavioral sciences outside schools of education.	2.7	1.64

Strongly Agree 5; Agree 4; Undecided 3; Mostly Disagree 2; Strongly Disagree 1.

scores, there is a greater proportion of respondents in the undecided category in item J; a broader range of opinion concerning J is indicated by the larger standard deviation for this item. This larger standard deviation results mainly from the greater tendency of respondents of University B to disagree with training of educational researchers in behavioral sciences outside of faculties of education.

Some relatively negative attitudes to research are indicated by the relatively high mean agreement with such items as B and E, the first suggesting that graduate students in education do not have much faith in the value of educational research findings, and the second indicating as a possible reason that educational researchers tend to lag behind behavioral scientists in their research techniques and methods. However, one possible means of remedying this - having good students in education take research training from behavioral science professors - is largely rejected.[7]

RESEARCH ACTIVITY

The basic purpose of this inventory was to learn of the research potential in education in the province. Table III-39 deals with past and current research activities of full-time and part-time student respondents.

Over all, 41 per cent of full-time students and 28 per cent of part-time students have been involved in research in the past. At Universities B and C, those respondents who are full-time students are much more likely to be involved in research than those who are part-time, but the reverse is true at University A, where the per cent is almost double in part-time students compared to full-time students.

Possibly, this unusual pattern at University A is related to the fact that part-time students may have completed their course and project work and are already doing thesis research. However this is only speculative. An interesting fact here, is that it is only at University A that part-time students are in a minority.

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[7] There are other items related to the training of researchers which have been dealt with in other sections. These are, in Background: Q.36, p. 16, and in Current Activities: Q.11, p. 21, Q.12, p. 21, Q.22, p. 27, Q.46, p. 28, Q.13, p. 24, Q. 15, p. 20.

TABLE III-39

Q. 19, 20 RESEARCH ACTIVITY: NUMBERS OF PROJECTS COMPLETED OR UNDERWAY - FULL-TIME AND PART-TIME STUDENTS

	UNIVERSITIES							
	A		B		C		TOTAL	
PAST PROJECTS COMPLETED	N	%	N	%	N	%	N	%
Full-time students								
ONE	43	20	10	31	49	36	102	26
TWO OR MORE	20	9	5	16	34	25	59	15
NO RESPONSE	157	71	17	53	54	39	228	59
Part-Time students								
ONE	25	33	25	15	21	13	71	18
TWO OR MORE	13	18	9	6	18	11	40	10
NO RESPONSE	38	50	131	79	123	76	292	72
PROJECTS CURRENTLY UNDERWAY								
Full-time students								
ONE	65	30	7	21	92	67	164	42
TWO OR MORE	9	4	4	12	12	9	25	6
NO RESPONSE	146	66	22	67	33	24	201	52
Part-Time students								
ONE	20	26	19	12	23	14	62	15
TWO OR MORE	5	7	4	2	5	3	14	3
NO RESPONSE	51	67	142	86	134	83	327	81

Exact comparisons are especially difficult in this question, because of the inclusion in our data from University A, of large numbers of respondents in Guidance programs. These tend to be younger[8].

We have also shown previously that the level of contact with professors on a one-to-one basis of part-time students at University A is just as high as that of full-time students, and this contrasts markedly with the situation at Universities B and C.

In terms of projects currently under way, full-time students seem more likely than part-time students to be actually doing research. This is particularly marked at University C, where more than three-quarters of full-time students, but only 17 per cent of part-time students, were actually engaged in research at the time of responding. Although the distinction between full-time and part-time students seems very minor at University A, it is substantial at University B.

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[8] At University A, many students enter Guidance training without first having had teacher training and teaching experience.

RESEARCH PLANS

Students were asked about research plans following graduation. Table III-40 shows their response patterns.

TABLE III-40

EDUCATIONAL RESEARCH PLANNED AFTER GRADUATION

	UNIVERSITIES							
	A		B		C		TOTAL	
Full-time students	N	%	N	%	N	%	N	%
YES	143	65	20	63	106	77	269	69
UNCERTAIN	43	20	5	16	16	12	64	16
NO	30	14	2	6	12	9	44	11
NO RESPONSE	4	2	5	16	3	2	12	3
Part-time students								
YES	54	71	60	36	81	50	195	48
UNCERTAIN	14	18	50	30	42	26	106	26
NO	3	4	33	20	26	16	62	15
NO RESPONSE	5	7	22	13	13	8	40	10

The data on Table III-40 indicate that more than two thirds of the full-time students in all three universities as a group, and almost half of the part-time students, plan to carry out research after graduation.

Full-time students are more likely to have plans overall; however, it is only at University A that the proportion of full-time students with plans for future research is not substantially larger than that for part-time students.

We are again faced with the problem of assessing the seriousness of such plans. We assume that if the students currently involved in research are more likely to plan work in research than those not so involved, these plans can be taken to be serious, honest intentions. Table III-40A shows the relationship between current research activity and plans for research in the future.

TABLE III-40A

HAVING RESEARCH PROJECTS UNDER WAY AND RESEARCH WORK OTHER THAN THESIS DURING YEAR RELATED TO PLANS TO CARRY OUT RESEARCH AFTER GRADUATION

	PLANS TO CARRY OUT RESEARCH AFTER GRADUATION			
RESEARCH PROJECTS UNDER WAY	YES	UNCERTAIN	NO	
YES	78%	12%	10%	$p < .001$
NO	47%	26%	27%	
RESEARCH WORK OTHER THAN THESIS DURING ACADEMIC YEAR				
YES	86%	10%	4%	$p < .001$
NO	58%	21%	21%	

As is clear from the per cents in Table III-40A, those who are currently involved in research are significantly more likely to plan research in the future than those who are not. While this may not give us much certainty as to the absolute number who will be productive, we are quite confident that the trends that we have observed are significant, that is that conditions such as the degree of interaction between students and professors, the proportion of part-time to full-time students, and many others, are important not only to current research activities of students, but to the research potential in years to come. If we really want to improve this potential, there are guidelines to be considered as a result of the findings presented in this chapter. These, and suggestions based on findings of other chapters, are summarized in the recommendations which appear after Chapter V.

In order to obtain some idea of the relative importance of intended research to other intended activities, students were asked what proportion of their time would be devoted to research. Table III-41 summarizes the results.

TABLE III-41

Q. 16 (Do you plan to carry out research after graduation ?) If YES, what proportion of your time would you expect to devote to it?

PROPORTION OF TIME	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
MORE THAN HALF								
Full-time students	26	12	1	3	24	18	51	13
Part-time students	11	14	0	0	14	9	25	6
HALF								
Full-time students	45	20	4	13	37	27	86	22
Part-time students	23	30	20	12	28	17	71	18
LESS THAN HALF								
Full-time students	66	30	16	50	39	28	121	31
Part-time students	18	24	42	25	36	22	96	24
NO PLANS OR NO RESPONSE								
Full-time students	83	38	11	34	37	27	131	34
Part-time students	24	32	103	62	84	52	211	52

The per cents in Table III-41 show that although many plan future research, few plan a very major commitment (more than half time) to it.

There are differences in the three universities, however. At University C, 45 per cent of full-time student respondents intend to spend half time or more on research, whereas this is true of only 32 per cent at University A, and 16 per cent at University B.

Question 16 included an open-ended opportunity to write in a response to the following:

> "Would you describe your plans briefly in terms of questions ,problems or hypotheses?"

Responses from all six universities show that a majority of students, both full-time and part-time, reply to the question and of that majority, 82 per cent claim to be planning to carry out research after completing their studies.

About 8 per cent of all respondents indicate plans for research not in the field of education. These include: biogeography, history of the U.S., "mycorrhization des semis de sapin en pépinières", the role of the father in French-Canadian novels, collective bargaining, gerontology, nature and functions of sleep, morphology of the hockey player, influence of wind in outdoor sports, and feeding behavior. (Apparently, in deciding to respond to our questionnaire, students working in a large variety of fields felt that their research was relevant to education.)

Approximately 5 per cent of those planning research have no definite plans or have not yet determined what subjects to investigate.

The vast majority however have plans for research clearly in the field of education and a great variety of potential studies is listed. The total number of studies anticipated actually exceeds the number of respondents since many are planning more than one project. A summary of topics proposed appears in Appendix III-17.

Reference to this Appendix will show that the major perspective to be brought to bear on educational research will be a psychological one. This becomes apparent in two ways: 1. some respondents are planning studies that are clearly within the field of psychology itself, such as abnormal psychology and developmental psychology; 2. others are planning research in areas not strictly psychological in themselves through the use of psychological theories and methods of research.

In terms of subject matter, the main emphasis will be on teaching methods both general and in relation to specific subjects, and on learning problems. Many respondents propose student-centered research projects dealing with matters such as exceptional children, vocational choice, and adjustment to school structures. Other popular areas include tests and measurement, and guidance and counselling.

Although it is clear that psychological questions dominate, other disciplines and fields are represented in the list. These include administration, curriculum, teachers and teacher education, and sociological problems.

Career Plans

Again, to place research among other possible career activities, students were asked to indicate the areas in which they were hoping to work upon completion of their graduate degrees, and we have summarized this information in Table III-42.

TABLE III-42

Q. 24 Please indicate by checking below, the area in which you hope to work upon completion of your degree.

	UNIVERSITIES							
	A		B		C		TOTAL	
EDUCATIONAL ADMINISTRATION	N	%	N	%	N	%	N	%
Teach	11	5	3	9	8	6	22	6
Practice	32	15	4	13	19	14	55	14
Do research	8	4	4	13	7	5	19	5
Total	51	23	11	34	34	25	96	25
GUIDANCE AND COUNSELLING								
Teach	19	9	4	13	6	4	29	7
Practice	109	50	19	59	22	16	150	39
Do research	40	18	9	28	10	7	59	15
Total	168	76	32	100	38	28	238	61
EDUCATIONAL PSYCHOLOGY								
Teach	25	11	5	16	26	19	56	14
Practice	49	22	5	16	35	26	89	23
Do research	43	20	6	19	44	32	93	24
Total	117	53	16	50	105	77	238	61
SOCIOLOGY OF EDUCATION								
Teach	11	5	2	6	4	3	17	4
Practice	23	10	1	3	6	4	30	8
Do research	31	14	3	9	10	7	44	11
Total	65	30	6	19	20	15	91	23
CHILD DEVELOPMENT								
Teach	19	9	3	9	22	16	44	11
Practice	44	20	3	9	19	14	66	17
Do research	36	16	4	13	28	20	68	17
Total	99	45	10	31	69	50	178	46

Q. 24

	UNIVERSITIES							
	A		B		C		TOTAL	
EDUCATIONAL RESEARCH	N	%	N	%	N	%	N	%
Teach	10	5	3	9	11	8	24	6
Practice	17	3	4	13	16	12	37	10
Do research	31	14	5	16	30	22	66	17
Total	58	26	12	38	57	42	127	33
TEACHING								
Teach	52	24	9	28	33	24	94	24
Practice	40	18	8	25	19	14	67	17
Do research	27	12	7	22	12	9	46	12
Total	119	54	24	75	64	47	207	53
SPECIAL EDUCATION								
Teach	6	3	0	0	9	7	15	4
Practice	20	9	1	3	17	12	38	10
Do research	12	5	1	3	13	9	26	7
Total	38	17	2	6	39	28	79	20
CURRICULUM DEVELOPMENT								
Teach	20	9	3	9	10	7	33	8
Practice	38	17	5	16	13	9	56	14
Do research	41	19	6	19	18	13	65	17
Total	99	45	14	44	41	30	154	40
OTHER								
Teach	10	5	5	16	12	9	27	7
Practice	15	7	3	9	20	15	38	10
Do research	16	7	6	19	22	16	44	11
Total	41	19	14	44	54	39	109	28

Over all the top three activities that are expected upon completion of the degree are "Guidance and Counselling", and "Educational Psychology", tied for first, followed by "Teaching". Within the universities themselves, "Guidance and Counselling" is first at Universities A and B, whereas "Educational Psychology" is the top one in University C. University C is unique in selecting "Child Development" as one of the first three. At the lowest level of selection, University C selects "Sociology", whereas Universities A and B both select "Special Education". "Research in Education" ranks sixth over all, ranking seventh at University A, sixth at B, and fourth at C.

These differences suggest some different training emphases at each of the three universities. They may also be related to different backgrounds in students; for example, we found that students with experience in teaching are significantly more likely to be planning to work in the practice of educational administration than those without teaching experience[9].

Depending on factors such as career plans, the Master's degree can be regarded as a terminal program, or a preparation for higher studies. Table III-43 presents information about the intentions of both part-time and full-time students vis-a-vis further study.

TABLE III-43

Q. 9 If you are now working on a Master's degree, do you intend to continue towards a doctoral degree?

	UNIVERSITIES			
	A	B	C	TOTAL
YES				
Full-time students	43%	38%	47%	44%
Part-time students	39	47	35	40
IF "YES", AT THE SAME UNIVERSITY?				
YES				
Full-time students	25	6	36	27
Part-time students	25	19	24	22
IMMEDIATELY?				
YES				
Full-time students	19	9	36	24
Part-time students	18	16	22	19

Almost half of those working on Master's degrees in the three universities state that they intend to continue towards a doctoral degree: 44 per cent of full-time students, and 40 per cent of part-time students, indicate intentions to continue. It is noted that at Universities A and C, much higher proportions are planning to continue at the same university, whereas this is not the case at

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[9] See Table III-8A, p. 13 .

University B. This may be related to language differences.

The fact that 36 per cent of full-time students at University C are planning to continue immediately towards a doctoral degree (and probably at their own university) suggests that the Master's degree is viewed as a part of the doctoral program.

The patterns for part-time students are not strikingly different: the exception is at University C, where a somewhat smaller proportion of part-time students than full-time students are planning to continue to the Doctor's degree immediately.

In terms of future research activity, the intention to go on to a doctorate is very important. We have compared this intention to plans to carry out research after graduation, in Table III-43A.

TABLE III-43A

INTENTION TO GO ON TO A DOCTORATE RELATED TO PLANS TO CARRY OUT RESEARCH AFTER GRADUATION

INTENTION TO CONTINUE TO DOCTOR'S LEVEL	PLANS TO CARRY OUT RESEARCH AFTER GRADUATION	
YES	71%	$p < .001$
NO	48%	

The figures in Table III-43A show that whereas just under half of the students not intending to continue their studies at the doctoral level plan to carry out research after graduation, almost three quarters of those who do are planning research. This finding underlines the importance of doctoral programs, and access to them, for the future of research.

SUMMARY AND CONCLUSIONS

The data obtained from the analysis of students' responses is of interest analytically by comparison to those data obtained from faculty members and deans because they represent information from independent sources bearing on the same basic problems. When information from independent sources give us essentially the same overall picture, our confidence in the validity of the data is greatly increased. Such is the case with these data.

As in the previous chapter, we will present conclusions in two sections. First, we will deal with the three universities separately; second, when the differences among the students from the three universities are not great, we will present our summary for the students as a whole group.

University A

The responses by faculty members from University A, it will be recalled, led to the impression of this university being much more research-oriented than the other two. The student responses support this conclusion; their emphasis upon research is very marked, as we would have expected it, judging from that of their professors. This comes about largely because of the fact part-time students at University A, unlike those at Universities B and C, are equally involved in research as full-time students. For example, 79 per cent of the full-time students, and 74 per cent of the part-time students at this university have a research requirement for the degree toward which they are currently working. Although the students at this university have the smallest proportion working on any type of doctoral program, compared with the other universities, this does not seem surprising in view of the large proportion of students here who are very young. For example, 15 per cent of the full-time students are 21 years of age or younger, and in addition almost half are between the age of twenty-two and twenty-four. In fact, respondents at this university often apply for graduate work upon registering for their undergraduate degree.

One of the most striking differences between this and the other two universities is that here the differences between degree requirements and programs for full-time as compared to part-time students are minimal. In addition, there is far less distinction between full-time students and part-time students in the extent to which they have contact on a small group or one-to-one basis with faculty members, than at either of the other two universities.

University B

Clearly one of the unique characteristics of the student body at University B is its age, 77 per cent of the full-time students being above the age of 27, and almost half of the part-time students being over 35 years old. These figures are consistent with the fact that 59 per cent of the full-time graduate students at University B have dependents. While the 65 per cent of part-time students here having dependents is not much larger than at the other universities, the average age here is much higher, largely due to the fact that a great majority of students at University B - 84 per cent - are part-time students. One possible reason for their being older is that entrance to all graduate programs, except one in which the enrolment is not large, normally requires teaching experience. It is not surprising therefore, that a large majority of students at University B have had teacher training whereas less than half full-time students at University A, and only about a third at University C, have such background. While fewer than one in six at Universities A and C have had elementary teaching experience, almost half of the full-time students from University B have had such experience. Further, the proportion with secondary teaching experience at University B is double that at the other two universities. Consistent with all these findings is the fact that respondents here have the highest proportion of the three universities with industrial and professional, and research experience in their backgrounds.

University B is the only one of the three in which the teaching assistantship is an important means of financial support for the students. In addition, it also has the highest proportion with research assistantships. Here, the students are more likely to be making a contribution to the work of the faculty in either a research or teaching role. This kind of collaboration between students and professors is probably possible to a large extent only because of the maturity of the students by comparison to that of students elsewhere. Also, in terms of absolute numbers, the fact that there are so few full-time graduate students makes this kind of activity quite feasible.

The major reasons given by student respondents at University B for their decision to attend graduate school are that first it will lead to professional advancement and second, they wish to prepare for a chosen career. Perhaps this is because, being older, they are likely to be in line for professional promotion and wish to add to their experience a formal qualification which will give them a competitive edge on their colleagues.

In terms of the kinds of program being followed, the doctoral degree is of minor importance. The dominant program is the Master's with 59 per cent of the students having completed it or working at this level without thesis requirements, and 34 per cent in the same situation but with a thesis requirement. In fact, this university has the lead in enrolment in the Master's degree not requiring the thesis. This indicates a tendency to a heavy professional graduate commitment on the part of students. The student emphasis on professional training parallels the faculty emphasis on professional preparation which was reported in Chapter II. The picture is consistent. By comparison to students at Universities A and C, a smaller proportion here feel that all faculty members should do some research.

As in the case of University A, we find that the information obtained from student respondents lead us to the same conclusion as those from faculty respondents. We note again an emphasis on professional graduate work rather than research at University B.

University C

Respondents at University C appear to be intermediate in age by comparison to those at Universities A and B. They are better qualified than those at the other two universities in terms of the degree they hold or toward which they are currently working. In addition the responses indicate more research experience per respondent.

What really stands out at this university by comparison to the other two universities, and especially to University A, is the difference in program and treatment of part-time students as compared to full-time students. This cannot be explained on the basis of one of two groups being negligible in size, since respondents are split almost evenly into the two categories.

While 34 per cent of the full-time students are in the Master's program with thesis requirement, only 4 per cent of the part-time students are in this category. Perhaps this helps to explain why 89 per cent of the full-time students compared to only 32 per cent of the part-time students, have regular contact with faculty members on a one-to-one or small group basis. The predominant program for the part-time students at University C is the *licence* without thesis. Only 4 per cent of the full-time respondents are enrolled in this program.

Students in General

The reader is reminded that from this point on in the conclusions, we are dealing with student respondents in general, without regard to particular universities.

Definition of Research

Students agree with professors (see Chapter II) that investigating factors which affect the teaching-learning process in the class-room, evaluating the effectiveness of new curricula and methods, and general studies of human learning and development, constitute research. In addition, they agree that designing new curriculum and methods of instruction is research, while faculty members are almost evenly split on this item. There are however areas of disagreement among students, one of the chief being that respondents at University B include investigating factors related to school administration, whereas this is excluded by most of the other student respondents.

Background and Characteristics

A majority of graduate students in education are men, these accounting for about three quarters of both part-time and full-time students.

Full-time students are younger than part-time students. About half of the former are 25 years of age or younger, whereas about two thirds of the part-time students are 28 years old or older.

About half of those enrolled are full-time. Of those who are part-time, 85 per cent have had teacher training. Over all, two thirds of all students are certified teachers.

Those with teacher training are less likely than those without to be enrolled in a degree program which requires research, or to have past or present research experience or intentions to do research in the future. Also, many of the student respondents have teaching experience; for them, graduate degrees are almost certainly related to hopes for promotion in current career lines rather than to future research careers.

As was the case with teacher training, teaching experience seems to predispose the graduate student not to be research-oriented and yet most graduate students in education feel that teacher training and teaching experience should be required of prospective candidates for admission to graduate programs in education.

While there is considerable teaching experience in the elementary and secondary level, among respondents, there is very little at the CEGEP and post-secondary level. Further, while there is no significant amount of school administrative experience, on the part of full-time respondents, about one fifth of part-time students have administrative experience. This kind of comparison which appears frequently in our analysis suggests that full-time and part-time programs meet different needs and that both should be regarded as legitimate and important methods of providing graduate training in the field of education.

The one road in graduate education that seems to lead to research is the Master's degree requiring thesis. Many of the academic Master's students go on to at least one further research project by enrolling in a doctoral program at some other university following graduation with the M.A. degree. By contrast, professional graduate degrees at the Master's or licence level generally do not lead to further research and as pointed out by the deans (see Chapter I, p. 7), students enrolled in these outnumber thesis students by a factor of six to one. This seems to result in large part from the fact that a very great proportion of graduate students in education are only part-time students, with a full-time involvement in a teaching or other public education occupation.

Current Activities

The nature of activities undertaken during graduate training has an important bearing on present and future research capacities in the province. A majority of full-time students and just over half the part-time students say that there is a research requirement for the degree they are pursuing and about two thirds of these, full-time or part-time, consider the research requirement extremely or very important. In most cases, the research requirement takes the form of a thesis study. The importance of a thesis requirement is borne out by the fact that those who have such a requirement are more likely to be full-time students, and tend to plan research after graduation; they probably have more contact on a one-to-one basis with professors in their research activities and are more likely to be working as assistants for other researchers.

In addition to a thesis requirement, some students become involved in other research as well and these are generally the ones who expect to be working in the area of educational research following graduation.

Not only are full-time students more likely than part-time students to be doing research (in addition to their thesis), but they are more likely to be enrolled in compulsory research-oriented courses.

Of the graduate students responding, more than two thirds indicate that they are in receipt of scholarships and bursaries.

Other sources of support include teaching assistantships and research assistantships. The research assistantship seems to be a promising form of student support since those who have it are much more likely than those who do not, to be planning research following graduation.

Part-time students, more than full-time students, say that their current research projects are of their own conception. This, considered together with the fact that part-time students have far less contact on a one-to-one or small group basis with their professors, suggests that they are more likely to be left on their own in their research activity.

The larger proportion of the students have their major contact in research activities with their professors; very few interact with other researchers, research assistants, student aides, or consultants.

Attitudes Related to Research

Among the various attitudes to research are those related to making a distinction between research and non-research graduate degrees and those related to the teaching and research role of professors of education.

A majority of students say that a distinction should be made between research and professional graduate degrees in education, although a small proportion argue against the distinction on the grounds that both types of training are necessary or that research should be required for every degree. Those favouring the distinction feel that it enables students to find training appropriate to their personal aptitudes.

Most students think that all faculty members should do some teaching as well as some research.

Factors Related to the Undertaking of Research

As was noted for faculty members, the most important factor in the selection of research problems is training and ability; current educational problems rank second.

On the whole, students express interest in a list of priority areas for research and agree that such a list would influence their choice of problems; in this they reflect their professors. One reason for this might be the large proportion of those involved in research activities who have financial needs, since they feel that a list prepared by a government agency such as the I.R.E. might improve access to research funds. But many other reasons are given; these include their interests in certain research fields, their belief that work in necessary areas would be of more practical value, and others.

Kinds of Research Being Undertaken

Student researchers favour the use of the questionnaire for data gathering and use descriptive statistics in the treatment of data; less frequently used are the experimental method and inferential statistics. Major scurces of data are teachers and secondary school students.

Attitudes towards Interaction

While a majority of students agree that other departments and faculties should be involved with graduate students in education who are pursuing research degrees, those who are active in research are significantly more favourable to such interaction than professional degree students.

Problems Related to the Conduct of Research

Research requires that those attempting it have access to equipment, bibliographic resources, data, and information.

Respondents were invited to indicate their major research needs. While equipment is not a pressing need and in general needs for data are being adequately met at all universities, the most important facilities desired by the respondents would be services and personnel related to the use of data banks and information retrieval.

There is very substantial agreement that information about on-going research at a pre-publication level is a necessity; in addition, many state that the availability of microfiches, microfilms and abstracts is inadequate. Accessibility to populations is not a serious problem.

In reply to two open-ended questions about problems related to the conduct of research, funds for research is the most frequently mentioned item; in this the students reflect the major concern of their professors. Improved coordination and communication, more information about on-going research, opportunity to work in teams on large projects are desired. Students express difficulties related to thesis supervision and the accessibility of their professors, and make wishes for more courses on research and more practical training to do research.

It is clear that there are some difficulties faced by students in their attempts to carry out research; perhaps if steps could be taken to remedy these difficulties, better use could be made of students as research resources.

Training of Researchers

Graduate programs in education are related to the further training of professional educators as well as to the training of researchers through the actual conduct of research. Nearly half of the students responding in this survey feel that the emphasis given to research programs by comparison to that given to professional programs is insufficient, whereas fewer than one in twenty feel that it is excessive. The students themselves, therefore,seem as a group to be aware of a need for an increased emphasis on the training of researchers through graduate programs in faculties of education. In addition to this, most of the respondents feel that there is a need to emphasize training for action research on the part of those who would later become practising teachers. This would suggest that there should be some research training for those pursuing professional graduate degrees such that they would be able to do research on instructional methods in their own classrooms.

Despite the findings reported above, there is widespread opinion that the techniques and methods used in educational research lag behind those used in behavioral sciences in general. And yet, students on the whole disagree with the statement that "persons who wish to make a career of educational research should receive most of their research training from professors in the behavioral sciences outside of schools of education". There is also some scepticism as to the value of the results of educational research for the classroom teacher.

Perhaps, these seemingly contradictory views can be understood to mean that faculties of education should recruit some experts in behavioral science research, for their own use, with the result that graduates with more sophisticated research capabilities would come out of both research graduate programs and professional graduate programs. The result might be research findings more useful to classroom teachers.

Research Activity

At the three largest universities, almost half of the full-time students but less than one in five of the part-time students, were actually involved in research projects at the time of answering the questionnaire. We reiterate that a higher proportion of full-time students will almost certainly increase research potential; in addition, steps should be taken to change the nature of graduate programs offered to part-time students in education, so that their research activities be increased and improved. That this is possible is suggested by the pattern at University A where part-time students constitute only a small proportion of the enrolment and where the programs they follow appear not to be in any way inferior (from the point of view of the research component) to those followed by full-time students. This is in sharp contrast to the situation at both Universities B and C.

Research Plans

Students generally pursue graduate studies with a view to qualifying for their future careers. Graduate students in education who responded to our questionnaire tend to be planning careers in guidance counselling, educational psychology, and teaching, in that order. For our respondents as a whole group, research ranks only sixth in their career plans, with about a third indicating that they hope to work in this field either through the teaching of educational research or through the conduct of research, or both. Despite this small fraction, two thirds of the full-time students at the three largest universities indicate that they plan to carry out some research after graduation, but only about one third of these expect to devote half or more of their working time to this activity.

The motives for undertaking graduate training are somewhat different for our part-time respondents who do not indicate the desire to obtain research skills as frequently as full-time students. Bearing in mind that part-time students are older than full-time students and are already embarked upon a professional career, this finding accords with our expectations.

The research areas included in the plans are Psychology, teaching methods, and learning problems. Apparently, students are more oriented to the uniquely educational areas of research than their professors who, as we noted earlier, are more interested in abstract, less practical research problems. It is interesting to speculate on this difference between students and professors. Does it mean that this generation of students has a more practical orientation to educational research than previous generations? Or is there something about the university promotion policies that makes it more profitable for professors to pursue more theoretical research? Is there more prestige in this for professors? It is easier to obtain grants for non-professional research? Are the reports of such studies easier to publish? These questions are worthy of further investigation.

CHAPTER IV

INTRODUCTION

The questionnaire which elicited the data contained in this chapter was designed to provide information about educational researchers other than those who work in faculties of education. These respondents work in a large number of organizations, each of which is included in the list which appears as Appendix IV-1.

Actual titles held by those who occupy themselves at least some time with educational research include professor, director, principal, teacher, guidance counsellor, and professional researcher. The work they do includes teaching, administration, welfare service, supervision of students, continuing education and similar occupations.

Researchers whose answers are analyzed in this chapter are classified under the following headings: university, school boards, colleges and normal schools, and "others". The category "others" includes respondents from various branches of the Quebec Department of Education, from teachers' organizations, from the research division of commercial organizations, hospitals, and professional groups.

The category "Colleges and normal schools" probably includes a majority of respondents who have some interest in teacher preparation, some of the colleges actually being teacher-training institutions.

In reply to an open-ended question asking for a brief description of major occupational tasks, many and varied activities were listed by respondents. These include teaching, preparation and standardization of examinations, evaluation of examinations, consultation, research, documentation, reading and studying (presumably in preparation for research and teaching), administration, and diagnostic clinical work.

Among the more unusual activities in addition to those listed above are the composition of music, film production, editorial work with journals, and bargaining with teachers and school boards. The respondents are involved in extremely diverse occupations. However, only about seven per cent mention research as a major occupational task.

DEFINITION OF EDUCATIONAL RESEARCH

Ideas as to which activities ought to be included in the definition of educational research are summarized in Table IV-1.

There are two ways of looking at the data in Table IV-1, to determine the degree of consensus as to which items should be included in a definition of research: the first is to study the differences between organizations (which tells us in what kind of context one is likely to include or exclude a particular item); the second is to study the degree of agreement among respondents, regardless of organizational affiliation.

In general, agreement among organizations as to what is to be included in a definition of research is high, although there are some differences. The only cases in which we see really large differences are "Collecting statistics on school practices and educational outcomes" and "Studying the educational research journals for lecture materials". In the former case, the range is from 14 per cent in school boards to 37 per cent in university. What this may mean is that there is some difference in what use is made of the collected statistics by school boards and university researchers. School boards generally do collect statistics but they do so for planning purposes in most cases; and the distinction between planning and research is probably well understood in the professional educational community. In the university, planning in this sense would be almost non-existent, at least as far as the average professor is personally concerned. Such planning would be the responsibility of a board of university administrators, and the professor would perhaps not be very conscious of it.

It is hard to explain why 24 per cent of the school board respondents would include the study of research journals in the definition of research. Perhaps school board respondents have as part of their responsibility the uncovering of new information for practising teachers.

TABLE IV-1

Q. 24 Since the term "Educational Research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "Educational Research"?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies".	28	37	3	14	3	20	6	23	40	29
b) Designing new curricula and methods of instruction.	43	57	10	48	10	67	19	73	82	60
c) Evaluating the effectiveness of new curricula and methods.	56	75	20	95	13	87	18	69	107	78
d) Local school surveys (curriculum, financial, plant, etc.)	16	21	5	24	4	27	6	23	31	23
e) Investigating factors which affect the teaching-learning process in the classroom.	57	76	20	95	11	73	21	80	109	80
f) Disseminating new curricula methods of instruction, or other school practices.	15	20	4	19	3	20	7	27	29	21
g) Investigating factors which affect school administration.	20	27	6	29	3	20	6	23	35	26
h) General psychological studies of human learning or development.	56	75	16	76	9	60	17	65	98	72
i) Presenting evidence to legislators of the need for greater support for the schools.	7	9	4	19	1	7	3	12	15	11
j) Developing new tests and measurements.	43	57	12	57	11	73	18	69	84	61
k) Analyzing the key concepts or philosophical assumptions underlying current educational issues.	29	39	7	33	7	47	11	42	54	39
l) Studying the educational research journals for lecture materials.	5	7	3	24	1	7	3	12	12	9
Number of respondents	75		21		15		26		137	

When it comes to differences between respondents without regard to their organizational affiliation, there are some items with surprisingly low consensus. For example, in the items "Designing new curricula and methods of instruction" and "Developing new tests and measurements", less than two thirds agree and more than one third disagree.

Other low consensus items include "analyzing the key concepts or philosophical assumptions underlying current educational issues" and "investigating factors which affect school administration". There is fairly high consensus that "studying the educational research journals for lecture materials" and "presenting evidence to the legislators of the need for greater support for the schools" are not research, and respondents are in general agreement that "investigating factors which affect the teaching-learning process in the classroom", "evaluating the effectiveness of new curricula and methods", and "general psychological studies of human learning or development", are [1].

Respondents were asked to identify the most important of these factors for the future of education. Their choices are presented in Table IV-2.

The item most frequently chosen by the respondents as of primary importance for the long-range improvement of education, is "investigating factors which affect the teaching-learning process" and this same item is also selected as "third" in importance more frequently than any other. It is also the item which makes most unanimity as being "educational research". "General psychological studies of human learning or development" is most frequently chosen as second most important item. This may suggest a predominance of psychologists among the respondents, which would be consistent with the history of the development of educational research, in which psychological approaches and methods have been pre-eminent for many years.

Other items frequently selected as important to the long range improvement of education include "evaluating the effectiveness of new curricula and methods" and "designing new curricula and methods of instruction". The data relevant to these observations appear in Appendix IV-2.

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[1] The reader is referred to Vol. I. Ch. II, p. 59, for a discussion of the implications of these opinions on our study of research productivity.

TABLE IV-2

Q. 26 Which of the activities in question 24 do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research"?

ORDER OF CHOICE Item	UNIV N	SCH B N	C N.S N	OTHERS N	TOTAL N
FIRST					
Investigating factors which affect the teaching-learning process in the classroom.	10	7	6	3	26
SECOND					
General psychological studies of human learning or development.	13	6	3	8	30
THIRD					
Investigating factors which affect the teaching-learning process in the classroom.	13	3	2	6	24
Number of Respondents	75	21	15	26	137

BACKGROUND OF RESEARCHERS

Degrees

Respondents were asked to list their degrees, and this is summarized in Table IV-3.

TABLE IV-3

Q. 6 Give a complete list of your degrees below.

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
UNDERGRADUATE DEGREES	69	92	19	90	15	100	23	92	126	93
MASTER'S	56	75	8	39	10	67	11	42	85	62
DOCTORATE	64	86	5	24	9	60	10	38	88	64
LICENCE	20	27	14	66	13	86	10	38	57	42
Number of Respondents	75		21		15		26		137	

Table IV-3 presents the numbers and percents of respondents who hold various undergraduate and graduate degrees, Virtually all the respondents have undergraduate degrees, and a majority also hold graduate degrees of some kind, most of which required the presentation of a thesis. The exception to this is respondents from the school boards, with 33 per cent in each case, having licence with thesis and licence without thesis. In the colleges, 73 per cent have a licence without thesis. Further details regarding thesis requirements are available to the reader in Appendix IV-3.

At universities, the doctorate with thesis is the degree most frequently held, whereas in normal schools, the licence is dominant. At the normal schools and colleges, about two thirds of the respondents have Master's and Doctor's degrees and about 86 per cent hold the licence.

On the whole, we are led to conclude that respondents at universities have the highest academic qualifications and that school board respondents have the lowest, among respondents from organizations other than faculties of education.

Table IV-3 summarizes the most commonly held degrees. However, it presents a much over-simplified picture, since the diversity of certification held is very great. This ranges from certificates of study, through diploma and licence, to degrees of various kinds, awarded by universities in Canada, the United States, France, Switzerland, Hungary, Italy and England. In addition, some respondents indicate that they have subject or area concentrations which are not recognized by any particular certification.

The subject areas related to the certificates and degrees held include the following: educational information, social philosophy and learning theory, music, law, theology, mathematics, history, counselling psychology, chemistry, commercial subjects, linguistics, audio-visual methods, social psychology and sociology, literature, and practical psychotherapy.

Table IV-4 presents professional teacher training other than that for which degrees were awarded.

TABLE IV-4

Q. 7 Professional teacher training other than reported in 6 above.

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	14	19	16	76	6	40	8	31	44	32
NO RESPONSE	61	81	5	24	9	60	18	69	93	68

The data presented in Table IV-4 indicate that only one third of the respondents hold a teaching certificate; however, there is considerable variation among categories, ranging from about one fifth at universities to three quarters at the school boards, with teacher certification.

Taking the findings related in Table IV-3 into consideration, one might be tempted to conclude that where researchers are best qualified academically they are least likely to have teacher certification. This is further supported by the fact that for the respondents in this chapter, only 44 per cent of those with teacher certification, as compared to 73 per cent of those without, have a doctorate. The difference is significant at the .01 level of confidence.

TABLE IV-4A

HAVING A TEACHER CERTIFICATE RELATED TO HAVING A DOCTORATE

HAVING A TEACHER CERTIFICATE	HAVING A DOCTORATE	
YES	44%	$p < .01$
NO	73%	

This seems to suggest that taking the time to obtain teacher certification subtracts from the time available to pursue graduate academic degrees, or possibly that many of those who do obtain teacher training are either not interested, not qualified, or otherwise not able to obtain a higher degree.

An analysis relating teacher training to research activity for these respondents was made. The results appear in Table IV-4B.

TABLE IV-4B

HAVING A TEACHER CERTIFICATE RELATED TO RESEARCH ACTIVITY

HAVING A TEACHER CERTIFICATE	RESEARCH ACTIVITY						
	Having done or currently doing research		Devoting the following amounts of time per week to research				
			0	1-24%	25-49%	50-100%	
YES	76%	$p < .05$	20%	45%	20%	15%	n.s.
NO	90%		9%	36%	22%	33%	

The figures in Table IV-4B show that a smaller proportion of the respondents with teacher certificates (76 per cent) are doing research as compared to those without (90 per cent). Further, there is a very slight tendency for those with teacher certificates who are active in research, to be spending a smaller proportion of their week on research than those without teacher certification.

Table IV-5 gives some impression of the respondents' previous experience.

TABLE IV-5

Q. 8 Count as one year of experience a (academic) year when you devoted more than half of your time to the following activities.

	UNIV %	SCH B %	C N.S %	OTHERS %	TOTAL %
TEACHING					
Elementary & Secondary	25	52	47	23	31
CEGEP & Post-Secondary	15	19	80	31	26
University & College	89	24	27	19	59
ADMINISTRATION					
Elementary & Secondary	3	38	13	4	9
CEGEP & Post-Secondary	5	0	20	12	7
University & College	37	0	13	8	23

Respondents at universities have more experience of teaching and administrating in their own organizations than others. By comparison, respondents from normal schools and colleges also have a good deal of teaching experience, but it appears to have been gained elsewhere in many cases; what this may mean is that elementary and secondary teaching and administration are a part of a fairly usual career line to college and normal school, whereas this is certainly not the case for the university respondents. Nearly two fifths of school board respondents have administrative experience and half have teaching experience in elementary and secondary schools. This suggests that public school teaching and administration may be a means of mobility to research positions in the school boards, as well as to colleges and normal schools.

Table IV-6 presents information concerning the number of years during which respondents have devoted more than half their time to research.

TABLE IV-6

Q. 8 Count as one year of experience a (academic) year when you devoted more than half of your time to research

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
YEARS	N	%	N	%	N	%	N	%	N	%
0	31	41	21	100	9	60	7	27	68	50
1-2	15	20	0	0	6	40	9	35	30	22
3-10	20	27	0	0	0	0	10	38	30	22
More than 10	9	12	0	0	0	0	0	0	9	7
Number of Respondents	75		21		15		26		137	

The most research experience seems to be represented in universities, where 12 per cent of the respondents have more than ten years of research experience; there is not a single researcher in other organizations with such long research experience. A contrasting fact is that in school boards not a single respondent has ever devoted more than half of his time to research. Of the 41 per cent of university respondents not reporting any years of research, it is likely that a majority spend a substantial proportion of their time on research. Our instruction "more than half of your time " may have had the effect of obscuring a significant amount of research which is done, but which does not account for half of the respondent's working time. This suggestion is strongly supported by the information in Table IV-8, which shows that while almost all respondents do some research, regardless of organization, more than two thirds spend less than half their time on research.

These findings help to build a consistent career picture, taking the information from the previous two tables into consideration. It appears that research is an integral part of the university teaching career itself whereas in school boards, colleges and normal schools, it becomes a new occupation following an earlier career in public school teaching and administration. This would help to account for the differences in academic training in these groups.

Appendix IV-4 reports on industrial and professional experience, which does not seem to be an important part of the respondents' career patterns.

Respondents were asked to indicate their training in areas related to research expertise, and this is summarized in Table IV-7.

The data in Table IV-7 indicate that university respondents are clearly better prepared to do research than those in other organizations. The per cent of university respondents with advanced training is greater than that for any other respondents in the areas of Statistics, Theory of Measurement, Methods of Measurement, and Research Design and Methodology. While advanced training in Computer applications is relatively rare regardless of respondents' affiliation, a considerable proportion of respondents in school boards, colleges and normal schools and "others" have none, whereas this is true for only three per cent at universities.

TABLE IV-7

Q. 47 Check each of the following areas in which you have some training and indicate at what level.

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
STATISTICS										
Advanced	21	28	4	19	1	7	4	15	30	22
Intermediate	30	40	11	52	8	53	10	38	59	43
Elementary	5	7	3	14	3	20	2	8	13	9
None	3	4	0	0	0	0	3	12	6	4
TOTAL	59	79	18	86	12	80	19	73	108	79
THEORY OF MEASUREMENT										
Advanced	21	28	2	10	1	7	2	8	26	19
Intermediate	20	27	11	52	6	40	12	46	49	36
Elementary	7	9	5	24	3	20	2	8	17	12
None	4	5	0	0	1	7	3	12	8	6
TOTAL	52	69	18	86	11	73	19	73	100	73
METHODS AND TECHNIQUES OF MEASUREMENT										
Advanced	24	32	2	10	1	7	3	12	30	22
Intermediate	23	31	11	52	5	33	10	38	49	36
Elementary	5	7	5	24	4	27	4	15	18	13
None	4	5	0	0	1	5	2	8	7	5
TOTAL	56	75	18	86	11	73	19	73	104	76
RESEARCH DESIGN AND METHODOLOGY										
Advanced	36	48	3	14	3	20	6	23	48	35
Intermediate	21	28	9	43	7	47	8	31	45	33
Elementary	2	3	4	19	2	13	4	15	12	9
None	3	4	2	10	0	0	1	4	6	4
TOTAL	62	83	18	86	12	80	19	73	111	81
COMPUTER APPLICATIONS										
Advanced	4	5	1	5	0	0	2	8	7	5
Intermediate	11	15	1	5	2	13	4	15	18	13
Elementary	31	41	6	29	7	47	6	23	50	36
None	12	3	9	43	3	20	7	27	31	23
TOTAL	58	77	17	81	12	80	19	73	106	77
Number of Respondents	75		21		15		26		137	

CURRENT ACTIVITIES

We have already suggested in our commentary following Table IV-6 that much of the research done amounts to less than half of the work week of the respondent. Table IV-8 specifies time commitments to research on the part of the respondents.

TABLE IV-8

Q. 9 What percentage of your work week do you spend on research?

PER CENT OF TIME	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
0	7	9	3	14	1	7	2	8	13	9
1 - 10	14	19	8	38	4	27	2	8	28	20
11 - 19	6	8	2	10	0	0	0	0	8	6
20 - 24	13	17	0	0	2	13	2	8	17	12
25 - 49	13	17	4	19	4	27	8	31	29	21
50 or more	20	27	2	10	4	27	11	42	37	27
NO RESPONSE	2	3	2	10	0	0	1	4	5	4
Number of Respondents	75		21		15		26		137	

In terms of per cent of work week, the distribution of time spent in research varies quite markedly, depending on the organizational context. The category "Other" has the largest per cent who spend half time or more on research; the reason for this is that the "Other" category probably includes those who are first and foremost professional researchers, rather than professors who do some research. In all other categories, a majority would have important responsibilities for teaching, administration and other such activities.

Very few - less than ten per cent - of the respondents over all are spending no time per week on research. But a substantial group - 38 per cent over all, are devoting less than a quarter of their time to research, and well over half of those doing research are devoting less than half their work week to this activity.

We were interested in what other activities were competing with research for the time of the respondents. Table IV-9 deals with this.

Subjects were asked to mention what activities other than research occupy their work week. While numerous and varied activities are indicated, three account for much the largest expenditure of time, and those are teaching, administration, and consultation. More than half the respondents overall (53 per cent) indicate that they spend 25 per cent or more of their work week in teaching activities. The extent of time devoted to teaching varies considerably on the basis of the institutional affiliation of the respondents; a majority of university and college respondents spend more than a quarter of their time on teaching, whereas a minority at the other organizations do so.

TABLE IV-9

Q. 10 What other major activities occupy the balance of your work week?

ACTIVITIES	UNIV		SCH B		C N.S		OTHERS		TOTAL	
Per cent	N	%	N	%	N	%	N	%	N	%
TEACHING										
24% or less	17	23	1	5	3	20	4	15	25	18
25% or more	56	75	2	10	9	60	6	23	73	53
ADMINISTRATION										
24% or less	26	35	1	5	3	20	3	12	33	24
25% or more	20	27	5	24	3	20	6	23	34	25
CONSULTATION										
24% or less	8	11	2	10	1	7	1	4	12	9
25% or more	0	0	1	5	1	7	0	0	2	1
OTHER										
24% or less	4	5	4	19	0	0	3	12	11	8
25% or more	3	4	5	24	1	7	2	8	11	8
Number of Respondents	75		21		15		26		137	

Administration accounts for some of the duties of about half the respondents, who are evenly divided into those who spend more than a quarter of their work week in this activity, and those who do less. It may be that these figures are somewhat inflated, because it is possible (and it seems likely) that the response rate in organizations other than faculties of education to questionnaires of the kind we circulated, would be higher on the part of those with administrative duties than for those without.

While consultation is not a very time-consuming activity by comparison to teaching and administration, it is the third most frequently cited activity, being included in the responses of about ten per cent of the subjects. "Other" activities included in the last category of Table IV-9 are supervision, planning, and clinical work.

ATTITUDES RELATED TO RESEARCH

Table IV-10 deals with the attitude of respondents towards the involvement of various categories of personnel in research.

TABLE IV-10

MODAL RESPONSE INDICATING IDEAL DEGREE OF INVOLVEMENT OF DIFFERENT CLASSES OF EDUCATIONAL PERSONNEL IN THE CONCEPTION AND CONDUCT OF EDUCATIONAL RESEARCH

CLASS OF PERSONNEL	UNIV		SCH B		C N.S		OTHERS		TOTAL	
Modal response	N	%	N	%	N	%	N	%	N	%
PROFESSIONAL EDUCATIONAL RESEARCHERS IN FACULTIES OE EDUCATION										
Very heavy	49	65	15	71	10	67	19	73	93	68
BEHAVIORAL SCIENTISTS IN FACULTIES OF EDUCATION										
Very heavy	46	61	13	62	5	33	19	73	83	61
BEHAVIORAL SCIENTISTS IN OTHER FACULTIES										
Very heavy	42	56	9	43	4	27	12	46	67	49
PROFESSORS INVOLVED IN TEACHER EDUCATION										
Heavy	32	43	7	33	5	33	14	54	58	42
CLASS TEACHERS										
Moderate	38	51	11	52	7	47	11	42	67	49
SCHOOL ADMINISTRATORS										
Moderate	32	43	6	29	3	20	14	54	55	40
Number of Respondents	75		21		15		26		137	

Information in Table IV-10 has been summarized from data in Appendix IV-5. For purposes of this presentation, we have limited ourselves to presenting here the modal response for each category of persons and the per cent of respondents from each organizational context who agree with the response. We note a fair degree of consensus that educational researchers in faculties of education should have very heavy involvement in both the conduct and the conception of research. Other categories of researchers whom respondents feel should be very heavily involved are behavioral scientists in faculties of education and behavioral scientists in other faculties. The respondents from colleges and normal schools are not as likely to indicate agreement with either of these positions as are the others.

Many respondents agree that professors involved in teacher education should have a heavy commitment to research, and that class teachers and school administrators should have a moderate commitment to the conception as well as to the conduct of educational research. However it is interesting to note that respondents from school boards and normal schools are more convinced than other respondents that school administrators should make a heavy contribution.

Respondents were offered the category "Other" and were asked to specify, if they selected this option. Among the categories specified, are included: research teams, graduate students, researchers in teachers' associations and unions, researchers in school boards and in parents associations, guidance counsellors, subject matter supervisors, engineering systems research people, philosophy professors, and many others.

One respondent expressed a concern for researchers with "both feet on the ground". The implication of the statement was that university professors are too theoretically oriented, and unaware of what really goes on, especially in primary schools.

FACTORS RELATED TO THE UNDERTAKING OF RESEARCH

Tables IV-11 and IV-12 deal with leaves of absence for research activities.

TABLE IV-11

Q. 12 Have you ever been granted a leave of absence to do research?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	13	17	4	19	4	27	3	12	24	18
Number of Respondents	75		21		15		26		137	

As was observed in the case of respondents from faculties of education, only a minority have ever been granted leaves for research; and since the actual numbers of those who have are so small, the differences for classification ranging from 12 to 27 per cent which appear in Table IV-11 are not significant.

TABLE IV-12

Q. 12A If "YES", what per cent of your salary did you receive while on leave?

PER CENT OF SALARY RECEIVED	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
LESS THAN A THIRD OR NO RESPONSE	63	84	18	86	12	80	25	96	118	86
A THIRD TO ONE HALF	1	1	0	0	0	0	0	0	1	1
MORE THAN HALF	5	7	0	0	2	13	0	0	7	5
FULL SALARY	6	8	3	14	1	7	1	4	11	8

Because of the small numbers responding, we are not in the position to generalize about what proportion of respondents from which organizations are supported during leaves for research, nor to what extent. What we can safely conclude is that few obtain leaves for research, and that for those who do, there seems to be no standard approach to remuneration during such leaves.

Twenty-one of the twenty-four who are represented in the above tables gave information as to what purpose was served by their leaves of absence. Almost half (10) used the time to complete the thesis requirement for graduate degrees, and another six used the time to pursue research; taken together, this shows that the majority used leaves for research activities. Other purposes included writing books and essays, attending conferences, planning, traveling, and meeting internship requirements.

Factors related to the choice of research problems are presented in Table IV-13.

The data in Table IV-13 lead to the conclusion that "training and ability" is the most important factor behind the choice of research problems, followed by the "content of the teaching field" of the researcher.

TABLE IV-13

Q. 27 Have the following factors tended to influence your choice of research problems to date?

FACTOR	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
TRAINING AND ABILITY	58	77	17	81	7	47	19	73	101	74
PROBLEMS RELATED TO CONTENT FIELD YOU ARE TEACHING	40	53	12	57	7	47	18	69	77	56
CURRENT EDUCATIONAL PROBLEMS	38	51	6	29	9	60	11	42	64	47
PREOCCUPATIONS OF YOUR DEPARTMENT OR FACULTY	25	33	9	43	6	40	17	65	57	42
PAST EXPERIENCE NOT RELATED TO PROFESSION OR TRAINING	24	32	4	19	2	13	9	35	39	28
PROBLEMS RELATED TO FACULTY-STUDENT RELATIONS	14	19	6	29	3	20	6	23	29	21
AVAILABILITY OF FUNDS	17	23	3	14	2	13	4	15	26	19
OTHER	6	8	4	19	3	20	3	12	16	12
Number of Respondents	75		21		15		26		137	

There are some striking differences among respondents from different organizations. For example, respondents from colleges and normal schools appear less influenced in their selection by training and ability than other respondents. Respondents from school boards seem less likely than others to be influenced in their choice by current educational problems, and this may result from the likelihood that researchers in school boards deal with problems closely related to the practical aspects of ongoing school programs.

The pattern for university respondents is similar to that of others, with perhaps one exception: that is the "availability of funds" seems to influence them somewhat more than the others. This way mean that university researchers are more dependent than researchers in school boards and colleges upon research funds from outside their own organization and must obtain them upon their own initiative.

Respondents were asked about the possible influence of a priority list of research areas in education on their choice of research topics. This is dealt with in Table IV-14.

TABLE IV-14

Q. 28 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	36	48	12	57	8	53	12	46	68	50
NO	27	36	5	24	5	33	13	50	50	36
NO RESPONSE	12	16	4	19	2	13	1	4	19	14
Number of Respondents	75		21		15		26		137	

About half of the respondents seem to favour a list of areas in which research is needed. Among reasons given for support of such a list, is the hope that it would help prevent duplication of effort, at least within the province. Also, one respondent acknowledges the importance of knowing what is urgent in terms of immediate needs, and several assume that, since such a list would help to generate an interest in financing research on the part of the Government, it would be useful.

Those who replied negatively are much more likely than affirmative respondents to explain their answer with additional comments. Many of these indicate that such a list would influence them only in the event that it included areas within their field of interest and competence. One response is "I work according to my feelings and beliefs."

There are other statements implying conditional acceptance. One respondent comments that he would want to see the list before judging it. Others imply that their acceptance would depend on the latitude offered the researcher, the order of priorities, and the general manner in which the list would be made public.

In general, the tone of many of the comments seems to be related to the belief that the autonomy of the researcher should not be threatened by the contents or the manner of presentation of any such list.

The respondents' opinions as to the interest of their organization in statements of research priorities from outside sources are summarized in Table IV-15.

TABLE IV-15

Q. 49 To what extent would your organization be interested in statements of research priorities from outside sources?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
DEFINITELY YES	20	27	9	43	6	40	16	62	51	37
PROBABLY YES	3	4	4	19	0	0	5	19	12	9
INCERTAIN	2	3	0	0	1	7	2	8	5	4
PROBABLY NOT	6	8	0	0	0	0	0	0	6	4
DEFINITELY NOT	0	0	1	5	0	0	1	4	2	1
TOTAL	31	41	14	67	7	47	24	92	76	55
Number of Respondents	75		21		15		26		137	

Table IV-15 indicates that researchers in universities do not perceive to the same extent as those in other contexts, that their organization would be favorably disposed to statements of research priorities from outside sources. It is interesting to note, also, that the response rate to this question at universities and colleges and normal schools, is low compared to that at school boards and "others"; perhaps this lower response rate is based on a reluctance to express negative feelings about statements of priorities.

Respondents were given the opportunity to comment on their answers. Their comments concerning statements of priorities range from very positive support of such statements, through disinterest, to obviously negative feelings.

Some respondents believe that statements of priorities are necessary, although one who holds this view thinks that it is not shared widely. The value of such statements is obvious to one respondent who works in a school commission and therefore is out of touch with what needs are felt elsewhere. Another respondent feels that such information would help him to keep his work practical.

Among those who appear to be somewhat sceptical, one respondent suggests that it would depend on how such lists of priorities were arrived at. Others feel that such lists may serve useful purposes as sources of information, but obviously fear whatever pressure which might accompany them; they stress the "for information only" point of view.

A number of respondents are clearly not in favour of such lists. They seem to feel that only they can decide what their priorities should be, and that it would be hard to be interested in what others regard as priority. There is evidently a great range of feelings about this issue.

The research funds obtained in the past are dealt with in the next two tables.

TABLE IV-16

Q. 30 Could you inform us on (the sources and amounts of) your research funds for the last two (academic) years for work done: a) in this province; b) elsewhere?

GRANTS RECEIVED FOR WORK DONE When	UNIV N	SCH B N	C N.S N	OTHERS N	TOTAL N
IN THE PROVINCE					
1967-1968	25	2	1	4	32
1968-1969	34	3	3	8	48
ELSEWHERE					
1967-1968	9	0	2	0	11
1968-1969	7	1	0	0	8
Number of Respondents	75	21	15	26	137

The most usual way of the respondents' dealing with this question is to ignore it and not answer. We interpret this response to mean that no grant was obtained in the particular year. This "no response" pattern is particularly high with respondents from the "school boards" and "colleges". Perhaps the reason for this low response rate is that there is no tradition for researchers in these organizations to apply to outside sources for research funds. The most frequent responses come from university respondents and this is taken to signify that university researchers are more successful in obtaining grants than others.

TABLE IV-17

SOURCES OF FUNDS 1967-1968	FREQUENCY	SOURCES OF FUNDS 1968-1969	FREQUENCY
NATIONAL RESEARCH COUNCIL	10	NATIONAL RESEARCH COUNCIL	13
INSTITUTE OF RESEARCH IN EDUCATION	3	INSTITUTE OF RESEARCH IN EDUCATION	6
MEDICAL RESEARCH COUNCIL (CANADA)	3	SIR GEORGE WILLIAMS UNIVERSITY -CASA	4
CANADA COUNCIL	2	CANADA COUNCIL	4
DEPARTMENT OF EDUCATION (QUEBEC)	2	DEPARTMENT OF EDUCATION (QUEBEC)	2
GOVERNMENT OF CANADA (unspecified)	2	MEDICAL RESEARCH COUNCIL	2
		PERSONAL FUNDS	2
McGILL UNIVERSITY-COMMITTEE FOR RESEARCH	2	LAVAL UNIVERSITY	2
SIR GEORGE WILLIAMS UNIVERSITY-CASA	1	McGILL UNIVERSITY-COMMITTEE ON RESEARCH	2
CATHOLIC UNIVERSITY (Wash.,D.C.)	1	GOVERNMENT OF CANADA	1
McMASTER UNIVERSITY	1	CENTRE DE RECHERCHE PÉDAGOGIQUE DE CAP-ROUGE	1
DEFENCE RESEARCH BOARD	1	COUNCIL FOR MEDICAL RESEARCH (QUEBEC)	1
OTHER	10	OTHER	12

Table IV-18 deals with financial needs and application for grants.

TABLE IV-18

Q. 32 Are there financial needs in your research activities which are not being supported by grants?
Q. 33 In searching out funds for research, have you made formal applications in the last two years?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
FINANCIAL NEEDS	43	57	5	24	5	33	12	46	65	47
APPLICATIONS	32	43	8	38	6	40	12	46	58	42
Number of Respondents	75		21		15		26		137	

Respondents in "universities" and "others" are more likely to indicate financial needs for research activities that are not being met by research grants; however, they are not so much more likely than respondents in "school boards" and "normal schools and colleges" to have made formal applications for funds in the two years prior to responding. Perhaps this suggests less success in obtaining funds to meet research needs on the part of "university" and "others" respondents, but this seems improbable in view of the fact that "university" researchers are generally very active and successful in obtaining research grants. What it probably means is that researchers in "school boards" and "normal schools and colleges" are less dependent on outside sources of funds for their research needs than those in "universities" and "others". But it may also mean that those who are most active in research are also most likely to apply for research grants. This relationship is examined in Table IV-18A.

TABLE IV-18A

RESEARCH ACTIVITY RELATED TO APPLICATION FOR FUNDS

RESEARCH ACTIVITY	APPLICATION FOR FUNDS	
YES	45%	p< .05
NO	21%	

Table IV-18A shows that while only 21 per cent of the respondents without research projects, either past or current, have made applications for funds, more than double this proportion of those involved in research activities had done so. The traditions of doing research and seeking research funds seem to go together.

Respondents were asked to indicate the amounts they had asked for. The data related to this question are presented in Appendix IV-6, but since the differences in pattern of reply are small, we do not present this information here. The responses show that of the 35 per cent who indicate how much they have asked for, about a quarter asked for less than $3 000, about one third asked for from $3 000 to $10 000, and the rest, about 42 per cent, asked for $10 000 or more.

Respondents were asked to indicate why they were not carrying out research in a university context. Replies are quite varied. In one case, the respondent indicates that greater freedom of action is obtained by working in a non-university context. Some indicate that their area of research is too new or controversial to be established in the university, whereas others mention very practical reasons, such as the availability of the subjects they are studying in some other contexts like schools, hospitals, or communities.

There are criticisms about the universities as a location for conducting research. One respondent implies that universities do not really do research, and another says that what is done at universities is mostly of the very esoteric and practically useless kind. It is also stated that the university does not provide the right working conditions, resources, or salary. For example, one respondent insists that one cannot do research in education in the universities because the faculties of education provide such minimal resources for research.

A rather surprising fact is that not one respondent mentions the freedom from teaching as a reason for carrying out research in an organization other than the university, and only one mentions the desire to work full-time on research as the reason.

TABLE IV-19

Q. 48 Do you feel that your research is related to education?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	20	27	14	67	8	53	24	92	66	48
NO	2	3	0	0	0	0	0	0	2	1
TOTAL	22	29	14	67	8	53	24	92	68	50
Number of Respondents	75		21		15		26		137	

Table IV-19 shows that a majority of respondents in the organizations other than university feel that their research is related to education. In the universities only a minority (29 per cent) took the trouble to reply to this question, which can be accounted for because of the wording: "Why are you not carrying on research in a university context?" (emphasis added). With the exception of university respondents, in reply to the question "Do you feel that your research is related to education?", the majority state that their research is educational research. Among those who answer otherwise, the relationship is generally quite close and obvious; examples include the study of high school students, student unrest, physical education, continuing education, pre-school curriculum, reading, re-education, visual perception related to learning, and theory of child development.

It is clear that much educational research takes place in contexts other than faculties of education.

KINDS OF RESEARCH BEING UNDERTAKEN

Areas of Research

Respondents were asked to indicate the categories into which their research could be classified. Table IV-20 summarizes some of these.

Table IV-20 reveals that the four most popular areas in educational research are: methods of instruction, tests and measurement, psychology of learning, and child development.

TABLE IV-20

Q. 14 As far as you know in which of the following areas, if any, is research now being undertaken in your faculty or organization?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
HIGH ACTIVITY AREAS	N	%	N	%	N	%	N	%	N	%
METHODS OF INSTRUCTION	31	41	8	38	6	40	12	46	57	42
TESTS & MEASUREMENTS	33	44	12	57	4	27	6	23	55	40
PSYCHOLOGY OF LEARNING	36	48	4	19	3	20	4	15	47	34
CHILD DEVELOPMENT	31	41	1	5	1	7	7	27	40	29
LOW ACTIVITY AREAS										
SCHOOL FINANCE	3	4	1	5	1	7	8	31	13	9
PHILOSOPHY OF EDUCATION	4	5	0	0	2	13	6	23	12	9
PROGRAMMED INSTRUCTION	6	8	2	10	1	7	2	8	11	8
COMPARATIVE EDUCATION	4	5	0	0	2	13	1	4	7	5
HISTORY OF EDUCATION	2	3	0	0	0	0	3	12	5	4

Methods of instruction rank high in all organizations, with tests and measurements being fairly important everywhere. Curriculum research seems to be little emphasized except in the colleges and normal schools.

Those areas with least emphasis include history of education, comparative education, programmed instruction, philosophy of education and school finance. Information about other areas appears in Appendix IV-7, which shows that the university and "others" are both characterized by fairly broad research interest in a variety of areas.

Respondents were invited to indicate areas in which they felt more research should be done. Since there are very few differences among categories in the responses, we have not included a table in the text. The interested reader is referred to Appendix IV-8.

Basically, it appears that researchers are happy with what is being done. They would like a little more research in most areas, with the exception of "tests and measurements". Subjects where the gap is quite large between what is done and what should be done, are "talent and creativity of students", "school-community relations", "teacher personality", "programmed instruction" and "philosphy of education".

An analysis of the relationship between teacher certification and the desire for more curriculum research was made, and appears in Table IV-20A.

TABLE IV-20A

HAVING A TEACHER CERTIFICATE RELATED TO DESIRING MORE CURRICULUM RESEARCH

HAVING A TEACHER CERTIFICATE	DESIRING MORE CURRICULUM RESEARCH	
YES	49%	$p < .01$
NO	25%	

As Table IV-20A shows, those with teacher certification backgrounds are twice as likely as those without to feel that more research should be done in the area of curriculum.

Table IV-21 summarizes the areas - theory vs practice, academic vs professional - emphasized by respondents in their research work.

In terms of the practice or theory dimension of research, the modal response overall is "Both about equally", but there is considerable variation in this among categories of respondents. Fully a third of university respondents emphasize "Theory" whereas a third or more of all other respondents emphasize "Practice".

This was to be expected given the fact that normal schools, colleges and school boards are concerned with practical applications in a professional field. What is surprising is that although more respondents at school boards, colleges and normal schools have a professional emphasis to their work than respondents at universities, "academic" is the most popular response category, regardless of the organizational affiliation of the respondents.

TABLE IV-21

Q. 22 In your present position, do you usually emphasize
a) Research primarily undertaken to test or expand theory
b) Research primarily undertaken to improve practice
c) Both about equally

Q. 23 a) Research related to a professional area, e.g. administration, etc.
b) Research related to an academic area, e.g. psychology, philosophy, etc.
c) Both about equally

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
PRACTICE-THEORY DIMENSION										
Expand theory	25	33	1	5	0	0	2	8	28	20
Improve practice	14	19	10	48	5	33	9	35	38	28
Both about equally	23	31	4	19	6	40	12	46	45	33
ACADEMIC-PROFESSIONAL DIMENSION										
Professional area	7	9	2	10	4	27	5	19	18	13
Academic area	39	52	9	43	6	40	9	35	63	46
Both about equally	10	13	2	10	3	20	4	15	19	14
Number of Respondents	75		21		15		26		137	

An analysis of the relationship between the two sections in Table IV-21 was made, and the figures are given in Table IV-21A.

TABLE IV-21A

EMPHASIS ON PROFESSIONAL OR ACADEMIC AREAS RELATED TO EMPHASIS ON RESEARCH UNDERTAKEN TO EXPAND THEORY OR IMPROVE PRACTICE

EMPHASIS ON	EMPHASIS ON			
	Theory	Practice	Both equally	
Professional	6%	71%	24%	
Academic	34%	32%	34%	p< .001
Both equally	10%	10%	80%	

Table IV-21A shows that researchers who emphasize research in professional areas tend to emphasize also research in order to improve practice; this relationship is significant at the .001 level. On the other hand, those who emphasize research in academic areas appear to aim equally at the expansion of theory and the improvement of practice.

The next three tables, IV-22, 23, 24, present information on the data gathering methods and the analytic approaches of the respondents, and on the populations from which they draw their data.

TABLE IV-22

Q. 20 What data gathering methods do you use?

METHODS	UNIV		SCH B		C N.S		OTHERS		TOTAL	
Time	N	%	N	%	N	%	N	%	N	%
EXPERIMENTAL										
Past research	27	36	4	19	6	40	2	8	39	28
Present research	31	41	7	33	7	47	9	35	54	39
QUESTIONNAIRE										
Past research	21	28	3	14	4	27	9	35	37	27
Present research	25	33	8	38	6	40	13	50	52	38
AVAILABLE DATA										
Past research	14	19	3	14	4	27	7	27	28	20
Present research	20	27	6	29	4	27	10	38	40	29
INTERVIEW										
Past research	12	16	0	0	4	27	9	35	25	18
Present research	25	33	5	24	5	33	9	35	44	32
OTHER										
Past research	6	8	1	5	0	0	0	0	7	5
Present research	6	8	0	0	0	0	2	8	8	6
Number of Respondents	75		21		15		26		137	

In reply to the question "What data gathering methods do you use?" respondents indicated that the most popular methods, both in the past and at the present time, are experimentation, the questionnaire, the use of available data and the interview. Table IV-22 seems to show an increase in the present use of every approach, but this simply means that more respondents are now doing research than formerly, and not that certain methods are becoming more popular.

Methods combined into the category "other" include observation, content analysis, and bibliographic research.

TABLE IV-23

Q. 21 What are your analytic approaches? Exclude student projects which are not a part of your own basic research.

ANALYTIC APPROACHES	UNIV %	SCH B %	C N.S %	OTHERS %	TOTAL %
Historical	9	5	27	12	11
Comparative	17	19	20	31	20
Logical	13	10	0	31	15
Theoretical	29	14	27	31	27
Statistical (descriptive)	55	48	47	62	54
Statistical (inferential)	39	14	27	35	33
Other	4	5	7	4	4

There appear to be very few significant differences among the categories of respondents as to the types of analytic approach used. Overall, descriptive statistics is the most frequently used approach, followed by inferential statistics and theoretical analysis. It is interesting to note that descriptive statistics is selected almost twice as frequently as inferential statistics; this suggests that the research done is predominantly of the fact gathering variety. While this is always necessary at early stages of research activity, it is to be hoped that in the future, attempts to build theory and to draw inferences will become a more predominant trait of the research being done.

There seems to be little difference between analytic approach to past and present research: respondents appear to be consistent in their methods.

TABLE IV-24

Q. 19 From what population(s) are you drawing your data for your research?

SOURCE Time	UNIV N	UNIV %	SCH B N	SCH B %	C N.S N	C N.S %	OTHERS N	OTHERS %	TOTAL N	TOTAL %
PARENTS										
Past research	4	5	1	5	2	13	3	12	10	7
Present research	8	11	4	19	3	20	4	15	19	14
TEACHERS										
Past research	5	7	1	5	4	27	10	38	20	15
Present research	12	16	6	29	6	40	11	42	35	26
ADMINISTRATORS										
Past research	4	5	0	0	2	13	4	15	10	7
Present research	4	5	3	14	4	27	5	19	16	12
PRESCHOOL CHILDREN										
Past research	7	9	2	10	1	7	3	12	13	9
Present research	10	13	4	19	1	7	7	27	23	17
GRADES 1-3 PUPILS										
Past research	12	16	3	14	1	7	4	15	20	15
Present research	16	21	4	19	2	13	7	27	28	20
GRADES 4-6 PUPILS										
Past research	11	15	2	10	0	0	3	12	16	12
Present research	17	23	1	5	0	0	3	12	21	15
GRADES 7-11 PUPILS										
Past research	10	13	3	14	0	0	6	23	19	14
Present research	15	20	8	38	0	0	4	15	27	20
CEGEP STUDENTS										
Past research	3	4	0	0	3	20	3	12	9	7
Present research	6	8	0	0	4	27	4	15	14	10
POST-SECONDARY STUDENTS										
Past research	0	0	0	0	1	7	1	4	2	1
Present research	1	1	0	0	2	13	4	15	7	5
UNIVERSITY STUDENTS										
Past research	24	32	2	10	3	20	1	4	30	22
Present research	28	37	0	0	2	13	4	15	34	25
SCHOOL BOARD MEMBERS										
Past research	7	9	0	0	1	7	0	0	8	6
Present research	1	1	1	5	0	0	1	4	3	2
UNIVERSITY PERSONNEL										
Past research	5	7	0	0	1	7	1	4	7	5
Present research	8	11	1	5	1	7	2	8	12	9
OTHERS										
Past research	8	11	0	0	2	13	4	15	14	10
Present research	12	16	0	0	5	33	5	19	22	16
Number of Respondents	75		21		15		26		137	

In terms of population from which respondents are drawing their data, there is considerable variation on the basis of where the researcher is located. For example, university respondents find university students to be their most frequent source of data, whereas respondents from school boards draw heavily from pupils and teachers. University respondents obtain data from elementary school pupils as their second most important source, and from secondary school pupils as the third. The pattern for school board respondents seems somewhat unusual in that although 38 per cent are drawing data from secondary school pupils, only 5 per cent appear to be studying problems of pupils attending Grades 4-6. This curious pattern probably deserves study in view of the popularity of the study of primary and preschool children which is apparent in Table IV-24. We wonder why the elementary pupil is being ignored.

The comparison of past research to present research shows a pattern quite similar to that for present research.

INTERACTION AND ATTITUDES TOWARD INTERACTION

Attitudes toward interaction with universities on the part of the respondents are indicated in Table IV-25.

TABLE IV-25

Q. 50 To what extent would your organization be interested in cooperating with universities?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
DEFINITELY YES	21	28	6	29	5	33	14	54	46	34
PROBABLY YES	2	3	6	29	1	7	6	23	15	11
UNCERTAIN	2	3	1	5	1	7	1	4	5	4
PROBABLY NOT	0	0	0	0	0	0	0	0	0	0
DEFINITELY NOT	0	0	0	0	0	0	1	4	1	1
TOTAL	25	34	13	63	7	47	22	85	67	50
Number of Respondents	75		21		15		26		137	

The very small response rate, with the exception of the category "other", suggests that no urgent need for cooperation with universities is felt by most respondents.

Almost none feels opposed strongly enough to indicate "probably not" or "definitely not", but it is only in "other" that a majority replies "definitely yes".

Comments offered in response to this question generally indicate approval, too. In fact, many inform us that collaboration is already a fact, in research as well as in other endeavours. However, two respondents stress that such cooperation must be reciprocal, and another complains that his organization has always cooperated with universities, but without ever obtaining any funds to encourage pursuit of his own research. In supporting such cooperation, one respondent states strongly that universities would gain a practical outlook as opposed to an "ivory tower" orientation, from collaborating with school commissions, and another draws attention to the contribution his organization can make as a source of data for research.

We were interested to know about the actual interaction taking place in the various organizations. Questions 41, 42, 43 and 44 were designed for this purpose and responses are reported in tables IV-26 to IV-30.

The variable response rate to items in Table IV-26, for example high for "researchers in other organizations" and "colleagues in your organization" and rather low for "consultant" and "assistant", probably indicates that certain particular items do not apply in some cases.

We might therefore include "no response" in the "never" category, at least for purposes of this discussion. If we interpret the answer in this way, we observe that fewer than half work with other scientific personnel with the exception of researchers in other organizations and colleagues in own organization. For example, less than half work with research assistants either students or non-students, with student aides, or with consultants.

The kind of collaboration depends to a large extent on the nature of the organization. Hence, respondents at "university" and "others" indicate the use of student research assistants, but not respondents at "school boards". This same pattern applies to working with student aides.

TABLE IV-26

Q. 41 In this academic year to what extent have you worked together with other scientific personnel in your research activities?

PEOPLE YOU WORK WITH: Frequency	UNIV N	UNIV %	SCH B N	SCH B %	C N.S N	C N.S %	OTHERS N	OTHERS %	TOTAL N	TOTAL %
RESEARCHERS IN OTHER ORGANIZATIONS										
Often*	26	35	3	14	3	20	5	19	37	27
Seldom	19	25	2	10	2	13	12	46	35	26
Never & no response	30	40	16	76	10	67	9	35	65	47
COLLEAGUES IN YOUR ORGANIZATION										
Often	41	55	8	38	11	73	19	73	79	58
Seldom	11	15	2	10	1	7	5	19	19	14
Never & no response	23	31	11	52	3	20	2	8	39	28
RESEARCH ASSISTANTS (NOT STUDENTS)										
Often	19	25	2	10	1	7	9	35	31	23
Seldom	7	9	3	14	1	7	4	15	15	11
Never & no response	49	65	16	76	13	87	13	50	91	66
RESEARCH ASSISTANTS (STUDENTS)										
Often	40	53	1	5	4	27	14	54	59	43
Seldom	7	9	0	0	0	0	1	4	8	6
Never & no response	28	37	20	95	11	73	11	42	70	51
STUDENT AIDES										
Often	25	33	1	5	3	20	7	27	36	26
Seldom	9	12	0	0	2	13	2	8	13	9
Never & no response	41	55	20	95	10	67	17	65	88	64
CONSULTANT										
Often	11	15	1	5	1	7	5	19	18	13
Seldom	3	4	2	10	0	0	4	15	9	7
Never & no response	61	81	18	86	14	93	17	65	110	80
PEOPLE YOU WORK FOR:										
AS CONSULTANT										
Often	29	39	1	5	3	20	7	27	40	29
Seldom	9	12	0	0	0	0	2	8	11	8
Never & no response	37	49	20	95	12	80	17	65	86	63
AS ASSISTANT										
Often	4	5	1	5	1	7	5	19	11	8
Seldom	5	7	0	0	1	7	2	8	8	6
Never & no response	66	88	20	95	13	87	19	73	118	86
Number of Respondents	75		21		15		26		137	

* "Often" includes replies to OFTEN and VERY OFTEN

If any general conclusion can be drawn from the information in Table IV-26, it is that where there is collaboration with other researchers, it occurs mainly with colleagues in one's own organization. This being the case, we would conclude that university researchers may have a considerable advantage over researchers in other milieus, since the universities probably represent the largest gathering of researchers in one physical location.

The relationship between collaboration with others and research productivity is shown in Table IV-26A. There is no significant relationship between research activity and collaboration with researchers in other organizations, but this was to be expected in view of the observations made above, namely that very few researchers work with individuals outside their own organization. It is important to realize that the most probable reason for non-significance is the number of instances of such interaction. These findings should not be interpreted as supporting the notion that interaction with researchers in other organizations would be counterproductive.

Table IV-26A shows, however, that those who work with others in their own organization do have significantly higher research productivity than those who do not. Our conclusion must be, therefore, that interaction is positively related to research productivity.

TABLE IV-26A

COLLABORATION WITH OTHER RESEARCHERS RELATED TO RESEARCH ACTIVITY

COLLABORATION		RESEARCH ACTIVITY		
		NO	YES	
with researchers in other organizations	YES	8%	91%	n.s.
	NEVER SELDOM NO ANSWER	16%	84%	
with colleagues in one's organization	YES	6%	93%	p< .01
	NEVER SELDOM NO ANSWER	23%	76%	

TABLE IV-27

Q. 42 Where are the persons referred to in 41 located?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
QUEBEC	55	73	10	48	12	80	24	92	101	74
REST OF CANADA	22	29	1	5	2	13	5	19	30	22
UNITED STATES	29	39	2	10	3	20	5	19	39	28
FRANCE	9	12	2	10	1	7	5	19	17	12
UNITED KINGDOM	5	7	1	5	1	7	1	4	8	6
BELGIUM	2	3	0	0	2	13	1	4	5	4
SWITZERLAND	5	7	0	0	0	0	0	0	5	4
OTHER	4	5	0	0	0	0	1	4	5	4
Number of Respondents	75		21		15		26		137	

Table IV-27 shows that of the respondents who collaborate with colleagues outside of the province, the majority are at the "universities". Of additional interest is the fact that more of these outside co-workers are located in the United States than in the other Canadian provinces. Both of these facts are probably related to the training of university researchers, much of which takes place in the United States, especially in the behavioural sciences. University researchers seem to have better access to outside personnel resources than those who work elsewhere.

In Table IV-28, forty-two per cent of the respondents indicate that they have interaction directly with professors (who are probably research colleagues) during the year in their research work. The 28 per cent who do work with school principals, the 34 per cent who work with teachers and the 43 per cent who have interaction directly with pupils in their research work have probably done so out of a desire to obtain data rather than "interdisciplinary" assistance.

TABLE IV-28

Q. 43 In this academic year to what extent has your research work involved you in direct interaction with other educational personnel?

PERSONNEL Frequency	UNIV N	UNIV %	SCH B N	SCH B %	C N.S N	C N.S %	OTHERS N	OTHERS %	TOTAL N	TOTAL %
DIRECTORS GENERAL										
Often*	5	7	4	19	3	20	5	19	17	12
Seldom	8	11	3	14	2	13	7	27	20	15
Never	28	37	3	14	3	20	6	23	40	29
TOTAL	41	55	10	48	8	53	18	69	77	56
SCHOOL PRINCIPALS										
Often	16	21	11	52	3	20	8	31	38	28
Seldom	11	15	1	5	1	7	4	15	17	12
Never	21	28	1	5	3	20	7	27	32	23
TOTAL	48	64	13	62	7	47	19	73	87	64
SUPERVISORS OF SUBJECTS										
Often	9	12	7	33	2	13	8	31	26	19
Seldom	2	3	0	0	0	0	2	8	4	3
Never	23	31	3	14	2	13	7	27	35	26
TOTAL	34	45	10	48	4	27	17	65	65	47
OTHER SCHOOL ADMINISTRATORS										
Often	6	8	4	19	4	27	6	23	20	15
Seldom	2	3	1	5	0	0	1	4	4	3
Never	24	32	2	10	1	7	8	31	35	26
TOTAL	32	43	7	33	5	33	15	58	59	43
TEACHERS										
Often	16	21	11	52	6	40	14	54	47	34
Seldom	11	15	2	10	2	13	3	12	18	13
Never	15	20	0	0	1	7	3	12	19	14
TOTAL	42	56	13	62	9	60	20	77	84	61
PROFESSORS										
Often	36	48	8	38	5	33	9	35	58	42
Seldom	5	7	2	10	0	0	1	4	8	6
Never	9	12	0	0	2	13	4	15	15	11
TOTAL	50	67	10	48	7	47	14	54	81	59
PUPILS										
Often	31	41	11	52	5	33	12	46	59	43
Seldom	9	12	2	10	1	7	2	8	14	10
Never	9	12	0	0	2	13	6	23	17	12
TOTAL	49	65	13	62	8	53	20	77	90	66
TEACHER ORGANIZATIONS										
Often	5	7	2	10	2	13	4	15	13	9
Seldom	2	3	4	19	2	13	3	12	11	8
Never	26	35	3	14	2	13	5	19	36	26
TOTAL	33	44	9	43	6	40	12	46	60	44
OTHER										
Often	3	4	1	5	1	7	2	8	7	5
Seldom	1	1	1	5	0	0	0	0	2	1
Never	5	7	0	0	2	13	1	4	8	6
TOTAL	9	12	2	10	3	20	3	12	17	12
Number of Respondents	75		21		15		26		137	

* "Often" includes replies to OFTEN and VERY OFTEN

Many researchers report that they never interact with directors general (29 per cent), school principals (23 per cent), supervisors of subjects (26 per cent), other school administrators (26 per cent), teachers' organizations (26 per cent).

There are again differences between organizations in terms of modal responses which suggest that the official availability of certain personnel makes interaction with them easier to initiate; for example, more of the university respondents interact with professors than respondents from other organizations whereas respondents from "school boards" are more likely to interact with school principals, with pupils and with teachers, than are most other respondents.

TABLE IV-29

Q. 44 In general, in the (academic) year, how fruitful have interchanges been with researchers outside your faculty or organization?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
VERY FRUITFUL	12	16	1	5	2	13	5	19	20	15
MODERATELY	30	40	3	14	4	27	8	31	45	33
LITTLE	12	16	3	14	3	20	6	23	24	18
NONE OCCURRED	11	15	4	19	2	13	4	15	21	15
TOTAL	65	87	11	52	11	73	23	88	110	80
Number of Respondents	75		21		15		26		137	

Table IV-29 shows that researchers in the categories "university" and "others" feel more positive about the usefulness of the interchanges they have had with other researchers outside their own organization than researchers elsewhere. Perhaps this is related to the point we have already raised about their training, in our discussion under Table IV-27.

Table IV-30 indicates that where exchanges have taken place, there have generally been no problems in connection with them.

TABLE IV-30

Q. 44A) Did you encounter any problems with interchanges?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	9	12	2	10	2	13	5	19	18	13
NO	33	44	3	14	6	40	13	50	55	40
TOTAL	42	56	5	24	8	53	18	69	73	53
Number of Respondents	75		21		15		26		137	

Respondents were invited to make comments about their problems in connection with work with other researchers.

The usual comment is that it is difficult to contact others due to inadequate communication channels. Several respondents express a desire for more seminars and colloquia so that they could learn what others are doing. In this regard it is pointed out that writing is not a satisfactory form of communication but that personal contact is necessary. However, two respondents report dissatisfaction with more contact, pointing out that such contacts do not necessarily lead to active collaboration. One reason suggested for this is that an individual is working in an area so new and unique, that there are no other researchers interested in the same problem.

A common complaint about collaboration is the shortage of time; distance is also mentioned as a barrier to interchanges among researchers.

Respondents were encouraged by use of a non-structured question to express their wishes for the future with regard to interaction. Interestingly enough, only one mentions the need of money, and two specify this indirectly by referring to a need for travel grants. By far, the most strongly desired change is more collaboration with other researchers. This desire takes many forms; a very frequent wish also is a suggestion that interdisciplinary teams be set up, and some respondents desire these teams to ignore the usual university boundary lines. One way suggested to achieve this is through the exchange of professors and students among universities. A very common answer suggests that interdisciplinary projects be undertaken on a scale larger than at present; such larger projects, it is believed, will accord a more prominent place than now exists for research. Another desire is the access to specialized assistants both of a technical (i.e. computer programmers), and professional (behavioral scientists) kind.

The respondents express the need for collaboration with persons other than colleague-researchers.

One professor mentions a desire for contact with educators in the field, in order to learn about problems that really need solution; and conversely, educational researchers express a desire for guidance from technical and professional experts.

Not only is it suggested that multidisciplinary meetings be made more frequent, but that they also be made more intense and meaningful. One suggestion that might help in the achievement of this goal is that bureaus for research in particular problem areas be set up.

Finally, several respondents indicate a need for systematic and continuous access to information about ongoing research elsewhere, so that needless, expensive duplications of efforts can be avoided. In one case, it is suggested that a central organization be set up for this purpose, and in another, the respondent indicates a desire to obtain this information from some government-sponsored organization.

PROBLEMS RELATED TO THE CONDUCT OF RESEARCH

We have already examined the responses concerning the financial needs of our respondents for research. The next two tables present needs for equipment and data.

TABLE IV-31

Q. 34 Do you need any equipment not available to you for your present projects or any that you would like to carry out.

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	28	37	4	19	2	13	12	46	46	34

About one third of the respondents claim a need for the equipment for current projects and this need seems to be most acute in respondents from "universities" and "others". This probably reflects a tradition of "university" and "others" respondents obtaining their own specialized equipment which would not be the case in school boards, normal schools and colleges.

TABLE IV-32

Q. 39 Are there any needs for data that are not met?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	8	11	2	10	2	13	5	19	17	12
Number of Respondents	75		21		15		26		137	

Respondents were asked to report on needs for data which are not being met; 40 per cent do not touble to respond to this item, and of the total group, only 12 per cent indicate a need for data which is not being met. For that 12 per cent, such a situation is probably quite serious, even though, on a table like this one, the figures may seem insignificant. It is impossible to conduct empirical research without access to data. This is perhaps an area deserving of more careful study in an attempt to satisfy the needs of researchers.

Similarly the respondents were asked to indicate the kinds of personnel who were not available to them in their role as researcher. Table IV-33 presents their responses.

There appear to be few critical needs. Most important is the unavailability of guidance to sources of funds, especially for non-university respondents. Another important need appears to be non-student research assistants.

The large degree of unavailability of computer programmers in the non-university context (about 25 per cent) suggests that steps might be taken to enable non-university researchers to take advantage of these resources which are available at universities.

TABLE IV-33

Q. 40 Indicate the personnel available to you in your role as researcher.

PERSONNEL NOT AVAILABLE*	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
SECRETARY	12	16	1	5	0	0	1	4	14	10
TYPIST	9	12	1	5	1	7	2	8	13	9
GENERAL CLERICAL	12	16	1	5	2	13	1	4	16	12
TRANSLATOR	15	20	3	14	2	13	1	4	21	15
COMPUTER PROGRAMMERS	7	9	5	24	3	20	7	27	22	16
NON-STUDENT RESEARCH ASSISTANTS	18	24	4	19	3	20	7	27	32	23
STUDENT RESEARCH ASSISTANTS	11	15	3	14	0	0	4	15	18	13
GUIDANCE TO SOURCES OF FUNDS	12	16	5	24	6	40	11	42	34	25
TECHNICIANS	12	16	3	14	3	20	5	19	23	17
Number of Respondents	75		21		15		26		137	

* As opposed to NOT NECESSARY and to AVAILABLE.

A more complete inventory of the needs of researchers appears as Appendix IV-9.

The following tables provide data relative to needs for information and documentation.

TABLE IV-34

DISSATISFACTION WITH THE AVAILABILITY OF SPECIFIC TYPES OF BIBLIOGRAPHIC RESOURCES

RESOURCES	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
CURRENT PERIODICALS	8	11	3	14	4	27	6	23	21	15
BOUND PERIODICALS	17	23	3	14	4	27	7	27	31	23
RESEARCH REPORTS (FINAL)	18	24	3	14	5	33	13	50	39	28
ONGOING RESEARCH (PREPUBLICATION)	22	29	3	14	4	27	13	50	42	31
ABSTRACTS	9	12	6	29	3	20	14	54	32	23
MICROFICHES	11	15	2	10	3	20	13	50	29	21
MICROFILMS	11	15	3	14	3	20	13	50	30	22
Number of Respondents	75		21		15		26		137	

Table IV-34 summarizes information which appears in Appendix IV-10. The "no response" rate to this question is rather high, especially in school boards, colleges and normal schools, where it ranges from 47 to 90 per cent. We interpret "no response" as indicating no urgently felt need for the particular resources.

On the whole, only a minority indicate shortcomings in the availability of current or bound periodicals. However, from this point on in Table IV-34 about half of all the respondents in the category "Others" indicate bibliographic inadequacies in terms of reports on finished and on-going research, abstracts, microfilms and microfiches. The subjects in school boards seem to feel less need for resources with the exception of abstracts, where 29 per cent are dissatisfied with their availability.

While the question asked for local availability and availability from outside sources, the distinction between these proved not to be important enough to report here in detail. Apparently, the source of the material seems to be less important than whether or not it is actually available to the researcher. The interested reader can refer to Appendices 10 and 11 for more detailed information.

TABLE IV-35

Q. 36 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	57	76	19	90	12	80	25	96	113	82

Table IV-35 shows that a majority of respondents, regardless of organizational context, feel a need for information about on-going, incomplete research at pre-publication stage. This, however, seems less acute at universities than elsewhere. One might have predicted this, since university researchers have many more colleagues in close proximity than researchers in the other organizations included in this chapter.

TABLE IV-36

Q. 36 If "Yes", in what form would you find it most useful?

ORDER OF CHOICE Item	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
FIRST										
Résumés	25	33	7	33	2	13	13	50	47	34
SECOND										
Periodical bulletin	5	7	2	10	2	13	4	15	13	9
THIRD										
Bulletin like *I.R.E. Bulletin*	2	3	3	14	2	13	1	4	8	6
Number of Respondents	75		21		15		26		137	

For those who desire information at the pre-publication stage, the most frequently mentioned form is the résumé. Much far behind but in second and third place are periodical bulletins, with the *I.R.E. Bulletin*, respectively.

In order to overcome to some extent the limitations of the pre-coded questionnaire, subjects were invited to respond to the following entirely open-ended question:

> "In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions."

The most frequently cited need in response to this question is financial support, this being referred to in some way by more than twenty per cent of the respondents. While some just refer to the need for money in general terms, others make quite specific requests, such as support for small projects, funds to support graduate students in their research, and even information concerning sources of funds.

Another frequent type of reply with financial implications is the indication of need for additional personnel, equipment and supplies. Some respondents simply mention the need for more personnel, whereas others emphasize the need for more competent aides, and research personnel with specific skills. A number suggest that technical assistance, including advice or planning, is necessary, but do not indicate whether they desire these to be located in their own organization or not.

Others specifically request access to technical assistants who would not, however, become a part of their team, apparently.

The lack of space and equipment presents serious problems in some organizations.

Many respondents indicate that documentation and dissemination of information services would be helpful. More specifically, suggestions in this category include the facilitation of interlibrary exchanges, the provision of information on on-going research, and early publication on a limited basis for analysis and evaluation of preliminary results by specialists. Some respondents also refer to the need for data banks, or for easier access to funds for data gathering, and to sources of data.

Since open-ended questions do not suggest answers, response rates far lower than those generated by pre-coded response categories, result from this type of question. Nevertheless, a surprisingly large number of respondents, more than 10 per cent, indicate that statements of priority areas in educational research would be of use to them. Such a response usually suggests the actual research area for which the priority should be declared. Included in this are dropout, developmental psychology, cybernetics, theory of learning, school readiness, tests, and many others. One is led to conclude that any researcher would find his work facilitated if only some responsible and powerful funding organization would declare his particular area of interest as having top priority. This phenomenon may go further than the mere provision of material support for the researchers; it is evident from many comments made that researchers are greatly concerned with their status and prestige in the educational community, and would like to see it enhanced, thus increasing their autonomy, while at the same time improving access to schools for data, and the attitude of the general public toward the importance of research findings.

Judging from the responses, the greater availability of training programs, as well as improved research programs in the universities, would be helpful.

One of the critical problems for researchers seems to be a shortage of time to carry on their research work. The major reasons cited for this are teaching assignments and administrative duties.

A good many respondents are of the opinion that improved contacts of greater frequency with other researchers would facilitate their work. The lack of communication is noted, not only among researchers, but between the researchers and their potential sources of data; such observations lead to the suggestion that more systematic approaches to liaison with school systems and with other researchers be undertaken. Also related to this type of response is the idea that more coordination of research planning and development might result from periodically recurring seminars which would attract practising educators as well as researchers.

The establishment of new research centers or the financial support of existing ones, is proposed. One such response includes the suggestion that such centers should be independent from the government; but many other respondents look to the government or to government agencies to provide assistance of various kinds, ranging all the way from public recognition of the role of the university in research, to the establishment of a large educational research organization. Other suggestions concerning the role of the government are as follows: that the government determine a philosophy of research rather than a policy; that it formulate an overall plan for educational research in Quebec; that it leave greater initiative to subsidized researchers who are well-qualified; that it establish a priority list of areas for research in education; and that it promote team and multidisciplinary research. It is clear that attitudes concerning the role of the government are extremely varied, and indeed, often diametrically opposed. Some respondents favour strict government control, but these are a minority; a more usual attitude is that the government should facilitate research activities by the provision of funds and services, but that it should not attempt to control research in any way.

TABLE IV-37

Q. 45 Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher? (Try to indicate roughly the order of importance of your suggestions.)

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	47	63	10	48	11	73	15	58	83	61
NO	7	9	1	5	1	7	3	12	12	9
TOTAL	54	72	11	52	12	80	18	69	95	69
Number of Respondents	75		21		15		26		137	

About two-thirds of the respondents agree that government agencies can make a really telling contribution to their work as researchers, and there is relatively little variation in this by respondent category.

In response to the incoded section of the question, a number of points are raised. Provision of money is the most frequently specified need; in some cases, statements are very brief, but other respondents go into considerable detail as to amounts, categories of persons who should be supported financially, kinds of organizations which should receive funds, types of activities to be supported. There are statements of needs for funds to pay personnel not now eligible for research funds, to establish and maintain research teams, to organize meetings among researchers to increase collaboration, to assist in publications, to produce films demonstrating the efficacy of certain teaching methods, to establish laboratories and libraries, to facilitate travel, for pure research rather than action-oriented research, and even to support the performance of new music.

A plea is made for more flexibility in the awarding of grants to a wider range of projects. One respondent requests that projects be funded on the basis of their own merit, and not on the eminence of the principal researchers. It is suggested that money be granted to school boards specifically, and that school boards and commissions should be required to create research posts on the basis of one researcher to 1 500 pupils, a suggestion which would result in well over 1 000 research posts in school boards!

A second area of need frequently mentioned is that of personal interactions and meetings among researchers. Also, the need to attempt to convince school systems of the need for, and value of, research, is stated quite often.

Other desired activities or services of governmental agencies include: organization of data banks, the definition of research areas of greatest urgency, coordination of research and the establishment of priorities, assistance through the provision of resource personnel, publication of information and research findings and access to equipment and supplies for research.

It is clear that many and various needs for research are felt, and it seems to be generally agreed that government agencies such as the Canada Council and I.R.E. should help to provide them.

TRAINING OF RESEARCHERS

Respondents were asked to indicate their involvement in the training of researchers.

TABLE IV-38

Q. 46 Are you involved in the training of researchers? (If so, to what extent?)

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	20	27	4	19	3	20	7	27	34	25
NO	3	4	11	52	7	47	14	54	35	26
TOTAL	23	31	15	71	10	67	21	81	69	50
Number of Respondents	75		21		15		26		137	

The data in Table IV-38 seem somewhat unusual, in that the response rate is so varied. Fewer than a third of the respondents from universities reply to the question concerning involvement in the training of researchers, whereas more than two-thirds in all other categories respond. Of those who do reply, a large majority in every organizational context excepting university indicate that they are not involved in the training of researchers.

Those who are involved in the training of researchers are generally either engaged in the supervision of dissertation research, or the teaching of courses on research or methods of research. In terms of the development of future research personnel, research carried on in universities is undoubtedly more productive than that done elsewhere.

Table IV-39 presents information concerning the categories of personnel, in particular student assistants, remunerated through research grants.

TABLE IV-39

Q. 31 If you received research grants in the past two (academic) years, did they include remuneration for

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Yourself	9	12	0	0	1	7	5	19	15	11
Research Assistants	24	32	0	0	0	0	4	15	28	20
Student Assistants	25	33	1	5	1	7	5	19	32	24
Consultants	8	11	1	5	2	13	3	12	14	10
Secretaries & Clerical	17	23	1	5	2	13	7	27	27	20
Others	10	13	1	5	1	7	2	8	14	10
Number of Respondents	75		21		15		26		137	

Student assistants are those for whom more respondents spend part of their research grants, followed closely by research assistants and office personnel. While university professors devote funds mainly to assistants, both students and professional, "others" have a wider range of uses, and school board, and college and normal school researchers indicate little application of grants to remuneration of any kind.

RESEARCH ACTIVITY

Three questions were aimed at obtaining a picture of the respondents' production of research. Table IV-40 contains the results.

TABLE IV-40

Q. 15 - 17 RESEARCH ACTIVITY: PROJECTS COMPLETED OR UNDER WAY

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
PAST PROJECTS COMPLETED										
ONE	14	19	6	29	4	27	3	12	27	20
TWO OR MORE	47	63	6	28	3	20	13	50	69	50
NO RESPONSE	14	19	9	43	8	53	10	38	41	30
REPORTED PROJECTS IN ADDITION TO THE ABOVE										
ONE	5	7	1	5	1	7	3	12	10	7
TWO OR MORE	17	21	1	5	0	0	3	12	21	15
NO RESPONSE	53	71	19	90	14	93	20	76	106	77
PROJECTS CURRENTLY UNDER WAY										
ONE	23	31	4	19	7	47	11	42	45	33
TWO OR MORE	27	36	5	24	2	14	7	27	41	30
NO RESPONSE	25	33	12	57	6	40	8	31	51	37
Number of Respondents	75		21		15		26		137	

Table IV-40 shows that in terms of past projects completed, the universities are in the lead, followed fairly closely by respondents in the category "Others". Respondents from universities are more likely to reply to this question than others and appear to be involved in a greater number of projects. This is supported by the second part of the table, which shows that 28 per cent of university personnel and 24 per cent of "Others" report projects over and above the basic three referred to in question 15, whereas only 10 per cent and 7 per cent in the school boards and colleges and normal schools, respectively, do so.

In terms of projects currently under way, the same pattern is observed with the school boards, colleges and normal schools appearing to be lower in productivity than respondents in the other two categories. Thus, the overall pattern is one of high research productivity in universities and the organizations included in the category "Others" as compared to school boards, colleges, and normal schools.

RESEARCH PLANS

Respondents were asked if they planned to do research in education in the two following years. Table IV-41 summarizes their responses.

TABLE IV-41

Q. 18 Do you have research plans related to the field of education for the next two years?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
YES	48	64	9	43	13	87	21	81	91	66
NO	14	19	2	10	0	0	2	8	18	13
NO RESPONSE	13	17	10	48	2	13	3	11	28	20
Number of Respondents	75		21		15		26		137	

As for anticipated educational research in the next two years, the school boards have fewer than half their respondents indicating such plans. Also, more than 35 per cent of university respondents either do not reply, or say that they do not plan to do educational research in the next two years. It should be borne in mind that the question asked for plans about educational research. Perhaps, had that qualification not been included, a higher proportion of university respondents might have replied YES. Those researchers in school boards, and colleges and normal schools, are unlikely to be planning research in fields other than education, whereas this subject area restriction would certainly not apply to respondents from universities, and not necessarily to those in the category "Others".

One might expect the respondents to indicate future plans for research simply because it is the "thing to do". Table IV-41A analyzes the relationship between having plans for research in the future and actual current or past research activity.

The fact that the relationship between these two variables is positive and statistically significant, suggests that these predictions are more than pious hopes.

TABLE IV-41A

RESEARCH ACTIVITY RELATED TO PLANS FOR FUTURE RESEARCH

RESEARCH ACTIVITY	PLANS FOR FUTURE RESEARCH	
Having done or currently doing research		
YES	72%	$p < .05$
NO	31%	

The question about plans for future research included space for comments about the content or field of the research. These comments were classified under a series of headings and are presented here as Figure IV-1 to give the reader some idea of the range and diversity of fields envisaged in the future planning of those currently working in education in Quebec.

FIGURE IV-1

AREAS OF RESEARCH TO BE UNDERTAKEN IN THE FUTURE

EDUCATIONAL PSYCHOLOGY & SOCIOLOGY OF EDUCATION

Handicapped and popular prejudices
Geographic differences and educational attainment
Quebec families: education and income
Economic development and educational output
Psychological and sociological factors influencing professional development and adjustment of individuals
Social learning in and out of classroom situation
Socialization
Psychomotor and sociometric status of the child
Autistic children show more deficiencies in social behavior than they show defensive isolation behavioral patterns

LANGUAGE

Vocabulary (2)
L. and disadvantaged children

FIGURE IV-1 (cont'd.)

Computer assisted instruction in L.
French for immigrants
Role of L. in learning problems
French at the elementary level
Second language
Spoken language (French)
Evening classes in L.: characteristics

PERCEPTION
Auditory skills and learning disability
Visual skills and reading retardedness
Perception problems and reading
Motor problems and learning
Factor models of changing structure of abilities
Body image in graphic expression

ADMINISTRATION
Management of school boards
Cost of public education
School finance
School law
"Raison d'être" of local school boards

CONTINUING EDUCATION (5)

LEARNING
Learning and memory aids
Application of learning procedures to the perception of maladapted behavior in nursery school children, high school and college students
Global blocks to Learning
Acceleration of cognitive processus in young children
Learning of Philosophy

PUPIL SERVICES
Vocational choice and parent-child relationships
Counselling (2)
Choice (by students) of courses at the college level
Sex education

FIGURE IV-1 (cont'd.)

ACADEMIC ACHIEVEMENT
A.A. and hyperactive adolescents
A.A. and compensatory education
A.A. and protein deficiency
Prediction of A.A. at the end of kindergarten

TESTS (4)

TEACHERS
Supply, demand, utilization
Evaluation of personality
Status
Evaluation of efficiency

EXAMINATIONS
Examinations and school learning
Standards of promotion at secondary level
Computer assisted self-testing

AUDIO-VISUAL TECHNIQUES
A.V.T. and Physics
A.V.T. for retarded children
A.V.T. in vocational education for adults

READING
R. at the secondary level
R. and printed material

PHYSICAL EDUCATION
P.E. and the emotionally disturbed
Teaching of P.E.

TEACHING
Teaching of Art
Teaching of History
Tutoring for disadvantaged children
Teacher-student relationship

PHILOSOPHY OF EDUCATION
Aims of college education

MISCELLANEOUS
Acquisition of religious maturity
Unorganized leisure time of Quebec adolescents

FIGURE IV-1 (cont'd.)

Measurement of the usefulness of a classroom telephone as a retrieval device
A faculty-keyed information retrieval system can be a worthwhile adjunct to university courses
Music structure perception

SUMMARY AND CONCLUSIONS

Definition of Research

We have already shown that one of the difficulties in making the comparisons among researchers from different organizations is that they do not agree on exactly what constitutes research and on what does not.

There are certain activities about which there is general consensus that they are, or are not, research. In the former category are investigating factors related to the teaching-learning process, and the evaluation of new curricula; whereas in the latter are included the study of the research journals for lecture materials, and the presentation of evidence to legislators in the hope of obtaining certain resources. But as is true for professors and students of faculties of education, there are many items about which there is much disagreement as to whether a particular item is part of the definition of research. These include: the analysis of the key concepts and philosophical assumptions underlying current educational practices; the study of factors related to school administration; the elaboration of new curricula and methods of instruction; and the development of new tests and measurements.

This lack of consensus as to what belongs in the definition of research makes it possible that much of what is reported in response to this survey as research may, from the point of view of some of the respondents, not really be research. From the point of view of the university researcher, the figures indicating the degree of research productivity in other organizations, especially colleges and normal schools, and school boards, may seem inflated.

Research Training and Background

These respondents are as varied in their own educational backgrounds as they are in their organizational affiliations. For example, almost all university respondents have the doctorate, whereas only one in four at the school boards have this level of formal education. If holding a doctorate can be taken as evidence of being properly qualified to carry out research, then the respondents from universities have the highest qualifications. However, there are other indicators of their research expertise: an inventory of their skills shows them to have more advanced training than other respondents in the following areas: statistics, theory of measurement, methods and techniques of measurement, research design and methodology, and computer application. Further, although a majority of respondents tend to use descriptive statistics rather than inferential statistics for analysis, the proportion using the more sophisticated inferential approach is higher among the university respondents than among those from other organizations.

In terms of their preparation for teaching, however, university respondents are very far behind other respondents in this group; only one fifth of them hold a teacher certificate. By contrast more than three quarters of the school board respondents are certified teachers. We are led to the conclusion that educational researchers who have teacher training are less likely than those who are not certified teachers to hold the doctorate, and this distinction is statistically significant at the .01 level of confidence. In addition, respondents with teacher certification are less likely than those without to report research done or research in progress ($p < .05$), and also less likely to devote a major portion of their work week to research (n.s.). However, the teacher certificate background predisposes respondents to be in favour of more research into the curriculum areas ($p < .01$). These conclusions should be accepted with some caution, since the groups being contrasted are not strictly comparable in some ways.

Factors Related to the Undertaking of Research

Respondents indicate that their training and ability is the most important factor in their choice of research projects. Hence, the fact that researchers in non-university contexts tend to have practical training and experience may help to explain their tendency to criticize university researchers as being too theoretical and impractical. It is clear however that training and ability are not the only factors. The populations selected as sources of data often seem to be those close at hand to the researcher. Therefore, the university researchers use university students whereas school board researchers draw data from pupils available to them in the public schools.

Among the factors related to the selection of research projects, the availability of funds is indicated by respondents as the least important. However, when asked directly whether they would be influenced in their choice by a priority list published periodically by the I.R.E., half agree that they would. The wording of the question led the respondents to understand that such a list might help them to gain access to funds for research.

Kinds of Research Being Undertaken

Researchers in the different organizational contexts are interested in different research areas. The most common areas are first, methods of instruction, especially at universities and others, second tests and measurements, especially at school boards and the universities, and third the psychology of learning, especially at universities. The research area least commonly cited is history of education.

The whole pattern of response shows that the theoretical emphasis in research is strong only at the university. By comparison, school boards researchers are more inclined to undertake the study of practical problems.

The fact that the quality of academic training is related to the organizational affiliation of the respondents is very obviously the result of the different career patterns that are typical of the various organizations.

Respondents from universities are engaged in research and teaching because of their formal preparation for it, and therefore a graduate student aspiring to a university career obtains the appropriate academic training. Administration as an activity carried on by university respondents appears to be a matter of factors other than training such as personal ability, experience, rank, and seniority. By contrast, we assume that people in other contexts, particularly school boards, colleges and normal schools, who do research, have been "promoted" to this work in much the same way that capable university professors have been "promoted" to administrative posts. What this may mean is that many of the researchers in colleges and normal schools, and school boards, are doing research not because they were trained for it but because they were successful teachers and successful administrators at an earlier stage. While these comparisons are admittedly somewhat speculative, they are consistent with the differences in background of the respondents from two different contexts, and background substantially influence the kind of research being undertaken.

Interchanges with Other Researchers

We have already referred to the feeling that some initiative should be taken to increase the amount of interaction with other researchers. Apparently, the written word is not an entirely adequate form of communication. Personal contact is thought necessary. Some respondents indicate the desirability of interdisciplinary teams working on large projects, multidisciplinary meetings, and some more regularized ways of bringing researchers into contact with those who would be in a position to implement the findings of the research.

Again, the degree of interchange that takes place varies by organizational affiliation. University researchers and "others", more than respondents in school board, colleges and normal schools, have fruitful interchanges. Perhaps this is because most collaboration with other researchers takes place within the researchers' own organizational context; this being the case, the size of the organization and the large number of researchers located there explain the more frequent interaction among researchers at universities than elsewhere.

In addition to their greater resources for collaboration within their own organization, it has also been found that university researchers cooperate with researchers outside the Province. On the whole, the United States are the largest source of external contacts, accounting for more of these even than the rest of Canada. The only other significant country in which interaction with Quebec researchers takes place is France. We assume that these interactions result from the contacts made during periods of graduate education, leaves of absence, and perhaps international conferences.

Despite all these evidences that some respondents collaborate with others both in and out of their own organizations, the great majority of educational researchers carry out their research alone. Educational research is often still handled on a one-man basis.

Problems Related to the Conduct of Research

Many respondents indicate that there are personnel, equipment or other facilities needed for the conduct of research. While most of these needs have financial implications, the vast majority of respondents have not held research grants. For those who have, the National Research Council has been the most frequent source of support. Other important sources of research grants include the I.R.E., the Canada Council, and the universities.

The most frequently mentioned need is for funds, and this is usually justified by an indication of how the funds would be spent. The usual intention is to obtain more personnel, in particular non-student research assistants. In addition, some respondents express a desire for access to experts who could guide them in their search for grants. There are also needs indicated for documentation, some kind of priority list of research areas, and for more time to apply to the actual work of conducting research.

The needs of researchers vary by organizational affiliation. For example, while a majority in universities and "other" indicate financial needs, only a small proportion of respondents in school boards, colleges, and normal schools do so. This may indicate that university researchers are expected to find their own funds for research whereas others, especially school board researchers, expect their funds to be provided for them by their own organization. Another difference is that researchers in the category "others" are more likely to say that their bibliographic resources are inadequate than the other respondents, most of whom do not specify any bibliographic needs. This probably reflects the difficulty of developing good research libraries in non-university organizations. When asked about the potential value of pre-publication of incomplete research, almost all respondents reply in the affirmative.

Contribution of Government Agencies

A majority of respondents seem to feel that the needs indicated above can be met by government agencies of various kinds. Hence, they feel that money must be made available for the purposes of obtaining assistance for publication, for travel, and other such research-related activities. However, some respondents make a plea for flexibility in the types of grants offered such that a greater diversity of types of research could be undertaken.

Many researchers appear to feel isolated, and suggest that government agencies help to promote interaction among researchers in a variety of ways. Others feel that the government agencies are in a good position to facilitate access to data banks. A necessity for coordination is indicated, and some respondents feel that such coordination must be undertaken by government agencies. One approach to such coordination is the publication of lists of priority areas for research.

While government agencies are looked to for support and coordination there are mixed attitudes towards them. A few respondents seem to favour government control; a majority, however, are in favour of the maximum possible government contribution with the minimum possible control. Contributions are desired, but interference is feared.

A variety of reasons for working in a non-university context are presented by the respondents. Some indicate that they obtain greater freedom of action whereas others feel that by working in organizations like schools and hospitals, they have better access to the subjects of their research. Others feel that by working in a non-university context they are able to pursue more down-to-earth projects; still others feel that their resources are superior to those at university. In view of the fact that the major competitors for the researchers' time are consultation, administration, and especially teaching, it is surprising that none of the researchers working in non-university contexts mentions the freedom from teaching responsibility as an advantage.

Research Activity

The above statements may give the impression that educational research is the object of a fair amount of activity. We would caution the reader against an inflated picture of the amount actually being done. It should be borne in mind that the respondents from the universities included in this chapter are a tiny proportion of the researchers in those institutions. Certainly, a much higher proportion of the researchers in the school boards, colleges and normal schools, have responded to this questionnaire. Despite this, only seven per cent of all the respondents in this chapter mention educational research as their major task. In fact, in those organizations where we would expect those in research posts to focus almost exclusively on educational research (school boards, colleges, normal schools), the proportion of respondents devoting a major part of their time to research is low. The category in which most respondents devote most of their time to research is "others". This must be because this category includes organizations whose major goal-orientation is research, and in which teaching is not required. However, a majority of respondents in the category "others" have been doing research for a shorter period of time than those at universities. Universities are the only organizations in which a substantial proportion of respondents have more than ten years of research experience.

In terms of the amount of research completed and currently under way, respondents at universities and "others" are much more productive than those elsewhere.

In conclusion, it must be pointed out that a great deal of educational research is carried on in contexts other than faculties of education. But in terms of long-term productivity, it must be borne in mind that the pursuit of research results in the training of new researchers only at the universities. There, the support of research results not only in the immediate solution to educational problems at a level of sophistication which is generally higher than elsewhere, but promises increased future capacity to tackle educational problems as students finish their training and take their place in the world of work.

Research Plans

On the whole, two thirds of the respondents indicate plans for educational research in the next two years. More than 35 per cent of university respondents either do not reply, or say that they do not plan to do educational research in the next two years. It should be stressed that the question asked for plans about educational research. Perhaps, had that qualification not been included, a higher proportion of university respondents might have replied YES.

CHAPTER V

INTRODUCTION

This chapter brings together information from the previous four chapters, and in addition, summarizes results of analyses of relationships among some of the factors that have been studied, especially those which have a bearing on research productivity. This enables us also to compare our findings from information provided by deans of education, by members of the faculties of education, by students in education, and by those who are concerned with educational research but who are located in organizations other than faculties of education, such as normal schools, school boards and research institutes.

Before beginning the summary, one or two facts should be brought to the attention of the reader. First, it must be borne in mind that while most of our student respondents are enrolled in faculties of education, a significant proportion of them (about 28 per cent) are graduate students in other departments such as psychology and sociology, who are carrying on research or pursuing graduate programs related to education. Further to this, it must be understood that there is tremendous variation in the size of student enrolment from university to university, and for this reason we most frequently draw our generalizations from figures provided by respondents at the three largest universities.

In the presentation of the summary of findings in this chapter, we will not often be referring to part-time students. Where we do deal with data in which their patterns are quite different, the distinction is drawn to the attention of the reader; but before we get to this point, the reader should be aware that part-time students are less likely than full-time students to be pursuing degrees requiring thesis and therefore research, and that part-time students usually pursue a great deal of their course work during summer school. It is generally agreed by the members of the faculties of education, that the quality of a graduate degree achieved through summer school is poorer than that obtained during the regular academic session (50 per cent of the faculty respondents say this) or is actually qualitatively different (22 per cent indicate agreement with this judgement).

Our inclusion of researchers in organizations other than faculties of education is justified by the fact their responses show that a substantial number of them - well over a hundred - are actually involved in educational research.

DEFINITION OF RESEARCH

We have already dealt with variations in the definition of research among respondents represented in the four previous chapters. Our comparison of deans, researchers from different organizational contexts, and of students, shows that regardless of organizational affiliation of the researcher or level of the student, the areas of agreement and disagreement as to what constitutes research are much the same. The only possible significant differences are that students generally agree that "designing new curricula and methods of instruction" is research, whereas faculty members are split on this issue. Further, full-time students and researchers in other organizations are less convinced than faculty respondents and part-time students that "investigating factors which affect school administration" is research.

In our introduction, we expressed some concern as to the meaning of our findings about research when these findings resulted from information provided by respondents many of whom have differences in their definition of research. We have no such hesitation in this chapter since, as Table V-1 shows, with minor exceptions in two items, the patterns of consensus and dissent are virtually identical for professors, students and others regardless of the organization with which the respondents are affiliated. As long as we are not attempting to relate factors to research productivity on the part of individuals with different definitions of research, we are on firm ground in comparing groups who in general agree.

BACKGROUND OF RESPONDENTS

From the information provided by the deans, we have learned that the majority of professors of education have had their training in schools and faculties of education.

TABLE V-1

PER CENT OF FACULTY OF EDUCATION, FULL-TIME AND PART-TIME STUDENTS, FROM THE THREE LARGER UNIVERSITIES, AND RESPONDENTS FROM OTHER ORGANIZATIONS, AGREEING THAT PARTICULAR ITEMS ARE RESEARCH ACTIVITIES

ACTIVITIES	*FACULTY MEMBERS	STUDENTS		OTHERS
		FULL-TIME	PART-TIME	
a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies".	34%	34%	37%	29%
b) Designing new curricula and methods of instruction.	51	72	64	60
c) Evaluating the effectiveness of new curricula and methods.	71	81	86	78
d) Local school surveys (curriculum, financial, plant, etc.)	35	33	34	23
e) Investigating factors which affect the teaching-learning process in the classroom.	80	84	85	80
f) Disseminating new curricula, methods of instruction, or other school practices.	16	29	25	21
g) Investigating factors which affect school administration.	42	24	45	26
h) General psychological studies of human learning or development.	69	69	68	72
i) Presenting evidence to legislators of the need for greater support for the schools.	9	8	14	11
j) Developing new tests and mesurements.	65	60	70	61
k) Analyzing the key concepts or philosophical assumptions underlying current educational issues.	53	40	45	39
l) Studying the educational research journals for lecture materials.	9	17	20	9
Number of Respondents	139	389	403	137

* Per cents for deans would be misleading, because of the small numerical base.

At only one university, University C, are there departments (three) in which a majority of professors have had their training outside of a school of education.

The research emphasis is in many faculties of education a recent development. Therefore, on the whole, it is probable that faculty members with a background in a school of education are less research-oriented than those from other faculties.

The background of the faculty members is of course determined to a large extent by the recruitment policy of the faculty. Only about a quarter of the faculty respondents inform us that in making appointments to faculties of education, candidates with a research degree are preferred despite the fact that more than a third of the faculty members at Universities A and C (43 per cent and 38 per cent, respectively) feel that the research degree should be given preference. At University B, only about a fifth of the respondents feel that research degrees should be given preference in hiring new faculty.

The background of a professor should give some indication of his capacity to do research. If a professor of education has completed a graduate degree which has required research, chances are better that he will do research, as a faculty member. However, only 32 per cent of the respondents in the faculties of education indicate that, in making faculty appointments, a preference should be given to those with research degrees; about 12 per cent feel that those with a professional degree should be given preference and more than a quarter feel that no preference between professional and research degrees should be given. It is interesting to note that those faculty members who say that the research degree should be given preference are significantly more likely to have done research themselves.

In terms of their research experience, only about half of the respondents in the faculties of education as a whole indicate that they have completed any research project. This seems a rather small proportion and is probably too high a figure since the response rate for those who have done research is greater than for those who have not.

Future Staffing Trends

To get some impression about what future staffing trends may be, we asked both deans and members of the faculty of education whether they would prefer to make new appointments from those with backgrounds in education or from those trained outside the faculty of education.

In addition, respondents were asked to indicate the kind of preferred experiences - whether research or teaching - in the background of candidates. Some deans were generally in favour of candidates trained in outside faculties whereas others preferred those trained in a school of education. The faculty respondents themselves, however, were strongly in favour of new cadidates being recruited among graduates of schools of education. And with the exception of professors for subjects in the area of curriculum, a background in research was generally preferred to one mostly in teaching, by both deans and faculty members.

Graduate students in education should be a major future source of education researchers, and yet a majority of the graduate students in education are enrolled in graduate programs which do not require the thesis. Only three of the universities have doctoral programs in education, and the students enrolled in these programs total less than three per cent of all graduate students. The responses from faculty members indicate greater preference for students to be directed into research degrees than professional degrees; most students in actuality are directed into professional degrees not requiring research. Over half of the faculty believe that the emphasis on the doctoral program is insufficient and a slightly larger proportion feel that research graduate programs receive inadequate emphasis by comparison to professional graduate programs. The proportion of students with this view is smaller but is still almost half.

Teaching Certification and Teaching Experience Related to Research Productivity

The only characteristics which are most common in all our respondents regardless of whether they are deans, professors, or students, are teacher certification and teaching experience. At least five of the deans have certification and all have teaching experience; over two thirds of the members of faculties of education are certified teachers; almost half of the full-time students and eithty-five per cent of the part-time students, are also certified teachers. Even of those respondents not in faculties of education, thirty-two per cent hold teaching certificates and thirty-one per cent have had teaching experience in elementary and secondary schools.

The characteristics of the student body result from admissions requirements. A large proportion of the respondents - deans, faculty members and students - feel that teaching experience and teaching certification are or should be mandatory for admission to graduate programs in education. Thus it appears that the background actually required is that which is most suitable for graduate professional training. In fact, our analysis shows that those students with teaching certificates are siginficantly less likely to be pursuing degrees with research requirements, than those without.

Students with teaching experience in elementary and secondary schools are more likely to indicate the hope of a future career as an administrator. This does not mean however that students with teacher training and teaching experience are necessarily negative towards research. For example, as Table V-2 shows, our analysis indicates that those with teacher certificates are significantly more likely to believe that teachers are better qualified to evaluate the results of their teaching than experts, and are more likely to agree that the findings of educational research are useful in the classroom. Further (see Table V-3), those with experience in teaching are significantly more likely to agree that teachers should be trained to do research on instructional methods in their own class-rooms.

It appears that an emphasis on the teaching certification background of graduate students in education is negatively related to research productivity, both present and future, on the part of those students so certified. This is further illustrated by the data in Tables V-4 and V-5.

TABLE V-2

HAVING A TEACHER CERTIFICATE RELATED TO OPINIONS CONCERNING THE EVALUATION OF THE RESULTS OF TEACHING AND THE USEFULNESS OF THE FINDINGS OF EDUCATIONAL RESEARCH

HAVING A TEACHER CERTIFICATE	OPINIONS			
	Teachers are better qualified to evaluate results of their teaching		The findings of educ. research are of little help in the classroom	
YES	55%	$p < .05$	62%	$p < .02$
NO	33%		70%	

TABLE V-3

HAVING EXPERIENCE IN TEACHING RELATED TO OPINION THAT TEACHERS SHOULD BE TRAINED TO DO ACTION RESEARCH

HAVING EXPERIENCE IN TEACHING	OPINION	
	Teachers should be trained to do research on instructional methods in their own classrooms	
YES	82%	$p < .05$
NO	75%	

TABLE V-4

HAVING A TEACHER CERTIFICATE RELATED TO HAVING PLANS FOR FUTURE RESEARCH

HAVING A TEACHER CERTIFICATE	HAVING PLANS FOR FUTURE RESEARCH					
	Prof. of Educ.		Students		"Others"	
YES	61%	n.s.	52%	$p < .001$	71%	n.s.
NO	48%		69%		65%	

TABLE V-5

HAVING A TEACHER CERTIFICATE RELATED TO HAVING DONE OR DOING EDUCATIONAL RESEARCH

HAVING A TEACHER CERTIFICATE	HAVING DONE OR CURRENTLY DOING RESEARCH							
	Prof.of Educ.		Students				"Others"	
			in the past		currently			
YES	67%	n.s.	30%	p< .001	28%	p< .001	76%	p< .05
NO	70%		44%		44%		90%	

Since the majority of graduate students are certified teachers pursuing non-research degrees, the potential for future educational research is not as high as it might seem on first inspection of the total number of such students.

Our analysis (not presented in detail) has shown that many student characteristics are not significantly related to the intention to go on to the doctorate. Such unrelated characteristics include age,whether they have teacher certification, whether they have teaching experience or administrative experience, whether they are engaged in research other than for their thesis, whether they are more or less in favour of having courses outside of the faculty of education, of having theses evaluated by members of other faculties, and whether they believe the admissions policy at the Master's level should require teaching experience. Despite this, it must be borne in mind that a much larger proportion of our respondents state the intention to go to the doctorate than will probably do so; it may very well be that actually fulfilling that intention is related to such factors, particularly age and the length of teaching experience, but this is speculative.

The relationship between the intention to pursue a doctorate and the expectation to carry out research in the future is not necessarily a one-to-one relationship, since there are doctoral programs which do not require research. However, as can be seen in Table III-43A, those who do intend to continue to the doctoral level are more likely to indicate plans to carry out research after graduation.

We have shown that teaching experience and certification are very common in the backgrounds of most of our respondents; but by contrast, the characteristic that seems most conspicuously absent is research experience. None of the deans has spent a year in which more than half of his time was devoted to research; more than half of the faculty respondents have not had such experience and only eleven per cent of part-time and eighteen per cent of full-time students have spent half time for at least one year in research. Even among those faculty members with research experience, only a small proportion has had research as a major commitment for three years or more. The one exception to this pattern is that just over half of the respondents in contexts other than faculties of education have spent at least one year in which more than half their time was devoted to research.

It seems reasonable to assume that for many of those respondents who claim to have had a major commitment to research, the occasion of that commitment was the fulfilling of research requirements for a graduate degree requiring a thesis; yet, of the faculty respondents in the three universities, less than a third hold a Master's degree with thesis and only twenty-nine per cent have a Doctor's degree with thesis completed. Another twenty-two per cent completed all the requirements for the doctorate except the research. This is in sharp contrast with the fact that 86 per cent of the professors responding from faculties other than education have doctorates either completed or in progress.

CURRENT ACTIVITIES

Questions were designed to determine the extent to which respondents are actually involved in research. We learn that thirty per cent of the faculty respondents are spending ten hours or more per week on research whereas fifty-eight per cent are spending this amount preparing for teaching. Only six per cent of the respondents say that they spend no time on teaching but forty per cent indicate that they do not spend any time on research. Clearly, the pressure in faculties of education is for teaching and not for research.

When professors are heavily involved in teaching during the academic year, one possibility for getting research done is to devote the summer recess to that activity. However, more than half of the faculty of education respondents indicate that they usually teach summer school as well, and others engage in activities such as the preparation of new courses, study, and reading.

One of the activities which involve faculty members in research is the supervision of student theses. Our findings are that perhaps about one third of the professors of education are involved in this kind of activity. A majority of students (except for part-time students at University B) say that there is a research requirement for the degree they are pursuing. They indicate that both they and their professors consider this requirement very important. About eight per cent of the students receive financial aid as research assistants, and about twelve per cent of full-time students indicate that their research projects are somewhat related to faculty research. Yet, over forty per cent of the full-time respondents, and almost eighty per cent of the part-time students do not have a regular contact with a faculty member on a one-to-one basis. This seems to suggest that a large proportion of student research projects do not originate in faculty research and also that a minority of faculty members are doing most of the supervision of student research. Thirty-nine per cent of full-time students indicate that they have often worked together with professors in their faculty in research activities. About one fifth of the professors say they have worked often with students as research assistants.

This kind of collaboration is obviously very important in the development of research capabilities. Our analyses show that those who work as research assistants are significantly more likely to be those who have a research requirement for their degree, to study inferential statistics, to have research underway, and to plan to continue research after graduation. These facts are presented in Table V-6.

The pattern of activities of students is very closely related to whether or not there is a research requirement in the degree being undertaken. Those with a research requirement are more likely to be full-time students, to be working in close collaboration with a professor in their own faculty, and in fact work as research assistants more frequently than other students (See Table V-7).

TABLE V-6

WORKING AS RESEARCH ASSISTANT RELATED TO HAVING A RESEARCH REQUIREMENT FOR THE DEGREE, STUDYING INFERENTIAL STATISTICS, HAVING RESEARCH UNDER WAY, PLANNING RESEARCH AFTER GRADUATION

WORKING AS RESEARCH ASSISTANT	RESEARCH REQUIREMENT FOR DEGREE	STUDYING INFERENTIAL STATISTICS	HAVING RESEARCH UNDER WAY	PLANNING RESEARCH AFTER GRADUATION
YES	87%	49%	59%	92%
	$p < .001$	$p < .001$	$p < .001$	$p < .001$
NO	66%	31%	32%	61%

TABLE V-7

HAVING A RESEARCH REQUIREMENT FOR THE DEGREE RELATED TO WORK IN COLLABORATION WITH A PROFESSOR IN ONE'S FACULTY AND TO WORK AS RESEARCH ASSISTANT

HAVING A RESEARCH REQUIREMENT	COLLABORATION WITH A PROFESSOR	WORK AS RESEARCH ASSISTANT
YES	65%	30%
	$p < .001$	$p < .001$
NO	21%	11%

If we are serious in our desire to increase the educational research potential, we must arrange programs such that more students interact with professors in all these research-related activities in the pursuit of graduate degrees which require the thesis.

ATTITUDES RELATED TO RESEARCH

Among the faculties of education, there is no standard convention of using different names for degrees which require research (i.e. M.A., Ph.D.) and those which do not (i.e. M.Ed., Ed.D.). All these degrees and others exist; but one can not tell from the name of the degree whether or not the respondent has actually done research.

Many of the students who plan to teach at the university level no doubt expect to do some research, since almost three quarters of them say that all faculty members should do some research. In this, they are supported by just over half the faculty respondents who also agree that all faculty members should do some research. University B is unusual in this regard with only forty-eight per cent of the full-time students, and only twenty-six per cent of the faculty agreeing that all faculty members should do some research. According to our respondents, university personnel are not the only ones who should be involved in the conception and conduct of research in education. This is especially true on the part of student respondents many of whom favour the heavy involvement of class-room teachers, school administrators, as well as behavioural scientists in other faculties. In fact, students feel that teachers are better qualified to evaluate the results of their teaching than experts. Faculty of education respondents and respondents in school boards, other university departments and normal schools, appear to be less likely than students to agree that people outside the faculties of education should be heavily involved in educational research; this can be inferred from the data in Table V-8.

FACTORS RELATED TO THE UNDERTAKING OF RESEARCH IN EDUCATION

If research is indeed a valued activity in education faculties, one would expect to see a positive relationship between research activity and rewards such as promotion to higher ranks. But rank is not related to the number of hours per week spent on research. More surprising perhaps is that the lower the rank of the faculty respondent, the more likely he is to have done, or be doing, research. Perhaps this is related to recent changes in recruitment policies; it may be that the newest members of faculty have been required to have a doctorate, or other research graduate degree. Another possible explanation is that the higher ranking professors have time-consuming administrative duties and hence are not able to devote time to research.

TABLE V-8

Which of the following do you believe should be involved in the actual conception and conduct of research in Education, and to what extent?

PERSONNEL Commitment	Faculty members %	Full-time Students %	"Others" %
CLASS TEACHERS			
Very heavy	7	8	6
Heavy	17	33	17
Moderate	50	46	49
None	6	4	4
No response	20	9	24
SCHOOL ADMINISTRATORS			
Very heavy	3	7	1
Heavy	14	26	14
Moderate	49	35	40
None	6	14	12
No response	29	18	32
PROFESSORS INVOLVED IN TEACHER EDUCATION			
Very heavy	27	43	26
Heavy	43	40	42
Moderate	13	8	12
None	1	1	1
No response	15	8	19
PROFESSIONAL EDUCATION RESEARCHERS IN FACULTIES OF EDUCATION			
Very heavy	65	81	68
Heavy	14	11	12
Moderate	3	1	1
None	0	1	19
No response	17	6	19
BEHAVIORAL SCIENTISTS IN FACULTIES OF EDUCATION			
Very heavy	47	62	61
Heavy	23	23	12
Moderate	9	5	4
None	0	1	1
No response	21	9	23
BEHAVIORAL SCIENTIST IN OTHER FACULTIES			
Very heavy	29	35	49
Heavy	27	35	18
Moderate	14	16	10
None	1	2	1
No response	27	12	23

No doubt the greatest competitor for the professors' time and energy is teaching responsibilities. A majority of the deans feel that teaching is the major responsibility of a professor of education, although one dean reports the existence of a professor concerned only with research and another indicates that he would agree in principle with having some professors of education occupied exclusively in research.

A majority of faculty members believe that the combination of teaching with some research activities is an ideal approach to the various possible roles of the education professor. However, a significant proportion of professors feel that teaching should come first, and that research must not interfere with the teaching process. In addition to this, double the proportion perceive that it is institutional policy that research must not interfere with teaching.

In response to the questions: "in your opinion, should all faculty members be required to do at least some teaching?" "In your opinion, should all faculty members be required to do at least some research?", a majority of faculty respondents at Universities A and C are in favour of faculty members doing at least some of both these activities; three quarters of the respondents at University B are in favour of all faculty members doing at least some teaching, whereas only about one quarter feel that all faculty members should do at least some research. The student respondents in the same three universities reflect faithfully the opinions of the faculty members about these two questions. It is certain that attitudes towards teaching and responsibilities for teaching interfere with research activities and yet it is surprising to note that not a single respondent from the other organizations such as school boards and research institutes cites freedom from teaching as a reason for carrying out research in a non-university context.

We had hypothesized that people who teach summer school would not be able to do as much research as those who do not. However, our analysis shows no relationship between teaching summer school and research productivity.

There is a relationship between beliefs about teaching and research responsibilities and attitude toward the value of research. Our analysis shows that students who believe that all faculty members should do some teaching are significantly more likely to believe that findings of educational research are generally of little help to the class-room teacher.

To some extent, research in education can be hindered by the demands of the school system for field services on the part of faculty members. The deans indicate that a small proportion of their faculty members are offering such services, but that an even smaller proportion (except for University A) are carrying out research. It may be that the demands for service absorb time and energy that might otherwise be put to the conduct of research.

The deans are aware that research is time-consuming and all of them consider research involvement when determining teaching loads for their faculty members. In addition, exemptions from committee and administrative work are accorded to researchers in faculties of education and a few receive additional remuneration for research undertaken during the summer. However, such concessions do not appear to be very widespread judging from the fact that deans feel the resources are not being badly strained by making such concessions; also fewer than twenty per cent of the faculty members admit that they obtain concessions as to teaching time, fewer than ten per cent feel that they obtain exemptions from committee work and only three per cent report that they receive extra remuneration for summer research. These concessions are not perceived in the same way by faculty members and by deans. We draw this conclusion from the fact that for every concession, respondents are more likely to see others benefit than themselves.

One possible concession that universities often make to researchers is the sabbatical leave. However according to the information given by the deans, very few faculty of education members have benefited from such leaves. The responses of the members of faculties of education show that only a small minority are actually aware of any sabbatical policies, and their replies concerning the specific details of sabbatical regulations show a great dissent even among those few who feel they know anything about such policies. Based on such various interpretations of sabbatical policies, twenty-four per cent believe that they are or have been qualified for sabbaticals, but only nine per cent have ever actually applied.

It is possible that administrators can have a fair amount of influence on the research activities in the faculty. We have already referred to the provision of concessions by deans to members of the faculty who do research. Faculty members are strongly in agreement (72 per cent) that administrators should facilitate and encourage faculty research, but not necessarily direct research programs, and yet only half of that proportion feel that this is what the administrators actually are doing. Deans seem to agree with faculty members as to their appropriate role in this regard but there is some tendency on the part of deans of the French-language faculties to misperceive the desires of their faculty members. French-Canadian deans perceive their faculty members as desiring only facilitation and not encouragement, whereas their faculty members would like to be encouraged as well.

Members of faculties of education, researchers in other organizations, and students, were all asked to indicate which factors had influenced their choice of research problems in the past; the most frequent answer for all groups of respondents is training and ability; this would suggest that recruitment policies will have a bearing on the kinds of areas that are undertaken for research in faculties of education. Another important factor for all respondents is "current educational problems" and researchers who have as part of their duties teaching responsibilities are inclined to cite problems related to their teaching fields as an influence on their choice of research projects.

It is interesting to note that for all respondents the availability of funds is the least frequently cited factor influencing the choice of research problems. However, a majority of respondents in almost every category indicate that a priority list issued by the I.R.E. would influence their choice of research projects. One wonders, since I.R.E. is a fund-granting organization, to what extent the availability of funds would influence the choice of research problems in the future.

Very few members of the faculties of education and educational researchers in other organizations have research grants. This may be related to the scarcity of funds for educational research in the past. A third of the faculty members say that they have financial needs for research not being supported by grants and this is true of almost as large a proportion of student respondents and of nearly half the researchers in other organizations as well. Between thirty and forty per cent of the non-student respondents in faculties of education and elsewhere had made applications for funds in the two years prior to answering the questionnaire and about a quarter of the students had also made such requests. It is clear that there are needs for funds which are not being met.

It is observed that those students who have financial needs not being supported by grants are more likely to have made formal application for funds, to have worked on research with professors in their own faculty, to have research projects under way, and to have plans for research in the future. This suggests that there are difficulties involved for students in conducting research but that those who are doing so are a promising source of future research capability; perhaps they deserve more financial support, than they are receiving.

As we have already pointed out, our analysis shows that compared to others, students who hold a research assistantship are significantly more likely to have research projects underway and to plan research in the future. We have also found that those students who are in favour of involvement of members of faculties other than education with them in their research, are more likely to have research projects underway than other students.

KINDS OF RESEARCH BEING UNDERTAKEN

One research area most closely related to the professional interest of educators is undoubtedly curriculum, and this is where deans express a strong desire for research activity. Other areas seem to belong in other departments such as psychology; these include adolescent and child development, research methodology, talent and creativity of students. Yet, judging from the type of projects actually under way, faculty members are not much interested in curriculum research. The three most frequently researched areas, in order,are as follows: first, tests and measurement; second, educational administration; third, psychology of learning. The only curriculum area with nearly as large an amount of work being done is the teaching of reading. However, where faculty respondents were given the opportunity to suggest areas in which they would like to see more research undertaken, they express preferences for a wider range of research areas than were actually being studied at the time of the survey. Respondents in school boards, normal schools, and other research organizations, express preferences similar to those of faculty of education respondents. Those respondents in organizations other than the faculty of education who are qualified teachers are significantly more likely than others to express a desire for research in the area of curriculum.

Researchers were asked to indicate whether they emphasize research designed to expand theory, research designed to improve educational practices, or both. A majority of the respondents in almost every organizational context (the only exception is school boards, where the preference is to improve practice) prefer to emphasize both theoretical and practical aspects in their research. However, where one is chosen in preference to the other, respondents seem somewhat more practically than theoretically oriented.

Respondents were also invited to indicate whether they tended to emphasize research in professional areas such as administration, or in academic areas such as psychology or philosophy, or both about equally. Here, we see a decided preference for research in academic areas, both among researchers in faculties of education and among those in other contexts - even school boards.

There is a nucleus of people interested in doing research in practical areas however, and whether these are located in faculties of education or other organizations, they are less likely to be interested in the academic than in the professional questions.

Closely related to the quality of research being done are the methods of data gathering and analysis. The most popular data gathering method among faculty of education researchers is the experimental method, questionnaire being second, and the use of available data, third. Researchers in organizations other than the faculties of education emphasize the use of the experiment and the questionnaire about equally. Students, on the other hand, seem to favour the questionnaire approach, followed by an almost equal emphasis on experimentation and interviewing.

As to analytic approaches, the most common approach is descriptive statistics followed by the use of inferential statistics. Theoretical and comparative analysis are also frequently used in education research.

INTERACTION AND ATTITUDES TOWARD INTERACTION

In faculties of education, interaction with members of other faculties or organizations can be set up as a matter of policy through requiring students to take courses outside of the faculty of education as is fairly common in the French-language faculties. Another general focus of interaction among faculties is thesis evaluation; however, this comes out at a very late stage in the conduct of research and probably has much less influence on the quality of research being done than patterns of interaction that take place earlier in research projects.

The interchange of ideas also results from the appointment of visiting professors, particularly during summer school sessions in faculties of education. Therefore, judging from information given by the deans, there is a good deal of interchange with personnel in relation to the graduate training of students in education. The faculty members, especially in the French universities, are favourably disposed toward the use of professors from other faculties in the training of students, and in the supervision of their research; but among students there is a great deal of controversy about this; a third believe that those who wish to make a career of educational research should receive most of their research training from professors in the behavioural sciences outside schools of education, a third disagree, and the rest are undecided. A majority of faculty members, and thirty-four per cent of the students, agree that members of other faculties could be helpful in evaluating education students for the degree.

This generally positive attitude to the interaction of students with members of other faculties is not reflected in the opinions of the professors of education. Deans indicate that there has been little interchange on the part of the faculty with other academic personnel, but that what has taken place has been reasonably fruitful. However, one dean mentions an attitude of superiority on the part of some members of other faculties in their dealing with professors of education, which may act as a deterrent to collaboration. The large proportion of the professors of education themselves, report that interchanges have not occurred. This is in sharp contrast to researchers in organizations other than faculties of education, the great majority of whom have cooperated in their activities with members of other departments or organizations.

Members of the faculties of education were asked more specifically about the existence of particular kinds of interchange. They report teaching by visiting professors, thesis evaluation by outside professors, joint teaching appointments, interdisciplinary seminars, research with visiting professors, and joint research appointments. More especially with regard to research, faculty members, students, and researchers in other organizations were asked to indicate to what extent they had worked together with other scientific personnel, both in and out of their own organization. Only about a third of the respondents from faculties of education have worked often with colleagues in their own organization, whereas almost double that proportion of researchers in other organizations have worked with their colleagues in research activities. In fact, we find again a tendency for faculty of education researchers to collaborate less with others in their research than members of other university faculties.

It is clear that members of the faculties of education are not as accustomed to working together with other scientific personnel as are those in other university faculties. The differences are even more striking by university, the proportions in University B collaborating with others are very much lower than those in Universities A and C.

Where research interaction occurs with others outside of the organization, one half of the respondents from faculties of education interact with researchers in Quebec, one seventh with researchers in the rest of Canada, one seventh with researchers in the U.S.A. and about one tenth with researchers in France.

Research activities seem to involve faculty of education researchers in direct interaction with others who are not researchers, as frequently as with other researchers. Thus their work brings them into contact with teachers, pupils, professors, school principals, subject supervisors and other such personnel. However, it is interesting to note that despite the fact that we would expect them to have better contact with public school personnel than other researchers, the extent of research interaction with such school people by researchers in other organizations appears to be about the same as that for members of faculties of education.

Educational problems often lend themselves to team approaches and interdisciplinary research. We asked faculty members about their attitudes towards interaction with people from other organizations. There is considerable interest expressed in having visiting professors for research activities and also interdisciplinary seminars; joint research appointments are favoured by about half of the faculty of education respondents and forty per cent agree with the idea of having joint teaching appointments and the desirability of professors from other faculties evaluating education thesis. In fact, there is only one area of interaction for which a good proportion of respondents are not in favour and that is the participation of non-deducation professors in the selection of members of the faculty of education, only about one in six being in favour of this.

On the whole, those members of the faculties of education who responded to our questionnaire seem to favour interchange with other personnel and our analysis shows that there is a signigicant relationship between having done research and favourable attitudes toward interchange for joint research appointments, visiting professors from other faculties, for teaching and for thesis evaluation. Further those who are currently spending time on research are significantly more likely than others to be in favour of visiting professors for teaching. (See Table II-47A, Vol. I, p. 136.)

PROBLEMS RELATED TO THE CONDUCT OF RESEARCH

Education faculties have not been noted for a large volume of research in the past, and faculty respondents in the three largest universities feel that the relative importance given to research in their faculties is less than that in their universities as a whole. This is undoubtedly related to a series of difficulties and their responses indicate that some of these problems are the following: needs for funds (as already noted), shortage of bibliographic resources (particularly information on on-going research, final research reports, abstracts, microfiches, and microfilms). This last set of difficulties for educational researchers (bibliographic resources) is shared by graduate students in education as well, but apparently not by researchers in other organizations, particularly universities. This difference in the shortage of bibliographic resources between faculties of education and other university departments is particularly striking as is shown by the fact that such shortages are noted by a majority of students and professors in education in almost every case, whereas the poor availability of final research reports and of reports on on-going research is indicated by well under a third of those responding from other university departments. In addition, the proportion of respondents noting that availability of abstracts, microfiches and microfilms is poor, in universities, is only about a third that of students and professors of education.

Another hindrance to the research activities of members of faculties of education is the fact that, with the possible exception of University A, research units or bureaus do not exist.

One way to learn what the difficulties are, is to ask the respondents what contributions could be made that would assist them substantially to increase their research activities. This was done and many suggestions were made. The need for financial support, for information about current research in Quebec, for technical assistance and consultation services, and the need to have research sponsored, are mentioned by respondents in all major categories.

Other suggestions include the creation of research centers or teams (no faculty of education member suggested this, however), grants to students, and assistance in the publication of research findings. Each of these is mentioned by respondents in three of the four major categories. Other frequently mentioned needs include assistance in the planning of research, the provision of a centralized education library for Quebec, information concerning sources of grants, techniques to favour exchanges between researchers, and equipment, These are all mentioned by two major categories of respondents. Finally, each of the following suggestions for the improvement of research is made by one of the major sources of information: facilitation of access to populations; secretarial assistance; provision of research courses; provision of an opportunity for research experience; more space; more time; documentation service; information retrieval service; data bank service; and travel assistance.

The situation in faculties of education is not all negative however, as members of a faculty of education appear to have certain advantages when it comes to the access to school personnel as sources of data. This is indicated by the fact that professors of education and their students tend to draw their data from public school sources whereas other university researchers are more likely to use populations more easily available to them, such as university students. Researchers in faculties of education should be encouraged to take advantage of their personal and professional contacts in the public education system.

TRAINING OF RESEARCHERS

Data from all of our sources indicate that is no organization are major efforts being applied to the training of educational researchers. Judging from the responses of the deans, almost no students are preparing themselves for research careers; and, only one faculty member in five indicates that students are directed into research graduate programs. In faculties of education, the main effort seems to be applied to the professional training of educators. This is not surprising in view of the statements of the deans that no requests for researchers have been addressed to them. A large majority of professors and slightly more than half the students feel that the emphasis on research programs relative to programs of professional preparation is insufficient or greatly insufficient.

It is only from doctoral programs that truly sophisticated educational researchers are likely to emerge, and yet enrolment in doctoral programs is rare. And among professors of education, there is general consensus that the emphasis on the doctoral program relative to the graduate program at the Master's level is insufficient.

Many of our sources indicate that a majority of graduate students in education pursue their studies on a part-time basis. One of the ways of providing this is through summer courses. There is among faculty members general agreement that the graduate research degree achieved through summer school is poorer than one achieved during regular sessions.

Students feel that the findings of educational research are generally of little help to the class-room teacher. This is probably related to their stated belief that the research techniques and methods used in educational research lag behing those used in behavioural science, generally. And yet, these same respondents are undecided as to whether graduate students wishing to make a future career of educational research, should receive most of their training from professors in behavioural sciences outside of the schools of education. Since a majority of respondents in organizations outside of faculties of education are not involved in the training of educational researchers, it may be that an important way of increasing the supply of educational researchers is to appoint behavioural scientists to faculties of education.

RESEARCH ACTIVITY

This is the area in which comparison between respondents at different levels and in different contexts becomes particularly difficult, both because of the lack of consensus in the definition of research and because of the differences in response rates from the different groups. On this latter point, the reader should be aware that we attempted to have all faculty of education members respond, whereas researchers in other organizations were encouraged not to reply unless they were in some way involved with or interested in educational research. Yet a few points can be made. (See Appendix V-1.)

In faculties of education, about half of the professors and a majority of students who have completed research in the past, have only one project to their credit. Other researchers are more likely to have completed a number of projects. A consistent factor negatively related to research activity is a background of teacher certification. In the case of education students and researchers in organizations other than faculties of education, those with teacher certificates are significantly less likely than those without, to have research projects in their backgrounds or underway. And while the relationship between teacher certification and past and current research activity is not significant for professors of education, the trend is without exception in the inverse direction. An insistance on teacher certification in faculty members and graduate students may have the effect of reducing productivity in research on education.

Educational research seems to require a team approach. This we conclude from our general findings that interaction with others and favourable attitudes towards interaction with other scientific personnel are positively related to research productivity. This is true of career researchers and students. Thus, professors active in research have greater contacts with scientific personnel in other organizations, than those who do not do research; and students active in research are those with contacts on a one-to-one basis with their professors, through work on common research projects, sometimes as research assistants.

Another set of factors closely related to research productivity of both professors and students, is the availability of support personnel such as secretaries, typists, and so on, or an expressed need for such assistance. Furthermore, needs for financial assistance are also generally more characteristic of those who do research than of those who do not.

RESEARCH PLANS

Respondents were asked to indicate whether or not they had plans for research in the next two years or, in the case of students, after graduation. In almost every category, a majority of respondents indicated that they did have such plans. In fact, the proportion of those planning research is so much larger than that of respondents currently engaged in research, that one must either conclude that there will be a very large increase in research activities in the immediate future or perhaps, more realistically, that many of these plans will not actually be fulfilled. The only categories of respondents in which a majority are not planning research are part-time students at University B and respondents from school boards. Further, a significantly smaller proportion of faculty respondents at University B (36 per cent) are planning research, compared to those at Universities A and C (over 60 per cent).

Despite the scepticism indicated in the above paragraph about these plans coming to fruition, our analysis suggests that these figures should be taken seriously, because it shows that those who actually are spending time on research and those who have spent time on research in the past are significantly more likely to be planning research than others. This is true of both faculty and student respondents. Moreover, there have been additional funds made available to educational researchers in the immediate past, particularly by Canada Council, and I.R.E.

Research degrees presumably prepare students for some research in their subsequent careers. Yet, according to the deans, over ninety per cent of the graduates are planning to work in school systems and almost three quarters of the faculty respondents say that the number of graduate students in education planning research careers is too small. While the deans say that they do not receive requests for graduates to fill research positions, a majority of the student respondents say that they will do "some research" and fully thirty-three per cent of the students who take graduate education indicate a desire to teach or to do research. There appears to be a great discrepancy between the impression given by deans and faculty members on the one hand, and the graduate students on the other. Possibly, most of the students who say that they are planning to do some research, do not expect this research to be a very major part of their responsibilities; "some research" is almost always not equivalent to "research career".

In fact, our cross-tabulation of responses shows that those who are planning doctoral studies are significantly more likely to be planning research after graduation. Perhaps one reason that such a high proportion of students are expecting to do research (despite the observations of the deans that almost none plan research careers), is that so many of the students (over 40 per cent) are planning to go on to the doctorate. This, judging from the small proportion at present enrolled in doctoral programs seems extremely optimistic. Yet, our analysis shows that those who have a one-to-one contact with professors are more likely to be planning to continue toward a doctorate, than those without such contacts. Additionally, those who hold research assistantships are significantly more likely to be planning to carry out research after graduation. This suggests that any increase in the research activities of professors which involve students will have a double value, by expanding current research and by improving the future potential. The increasing support for educational research noted above gives us a good reason for optimism about the future.

RECOMMENDATIONS[1]

Our study has led us to a better understanding of some of the variables related to research productivity in education. We are prepared to make a number of recommendations that might be considered in planning for educational research. We simply present them as numbered statements.

Background

1. Steps should be taken to encourage the hiring by the schools of education of new professors with behavioural science training and background, and research capacities.
2. Teacher training or teaching experience in public schools should not be considered as absolute pre-requisites for hiring by a school of education.
3. At the present, academic rank in faculties of education seems to be inversely relatet to research activity, past and present. Research should be encouraged by making it an important factor for advancement in a career as professor of education.
4. Graduate schools of education should not insist on teacher training or teaching experience as a requirement for admission of all students to research graduate education programs.
5. Steps should be taken to encourage candidates to a graduate degree to enroll in their program as full-time instead of part-time students.
6. Steps should be taken to encourage candidates to a graduate degree to enroll in programs requiring research.

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[1] These recommendations were presented in September 1970, in a preliminary report entitled: Educational Research in Quebec: Resources, Problems and Prospects, 1968/69.

7. Steps should be taken to encourage those students at the Master's level who wish to go on to pursue doctoral studies, to realize their intentions.

Activities

1. Schools of education should develop more flexible definitions of the roles of their professors so that research can be prominent for more faculty members than at the present time.

2. Priorities should be established so that teacher training and educational service activities do not absorb all the time and energies of professors of education qualified to do research.

3. Arrangements to facilitate research - for example, reduction of teaching loads and student supervision duties, exemption of committee work - should be established on a regular basis in faculties of education and professors should be informed that these are available to them.

4. Sabbatical leave policies should be improved or established and those should be communicated so that faculty members are fully aware of the possibilities of sabbatical leaves for the up-grading of research skills, and for the completion of research projects.

5. High level posts for professors who are skilled in and have a major commitment to research should be made available. For example, an assistant dean could be responsible for the development and coordination of research activities, leaving the dean responsible for the commitment of the faculty to professional preparation.

Interaction

1. Research in education requires cooperation between researchers. To this end, the establishment of research centers, bureaus, or departments, may help to bring enough researchers together.
2. The interaction of researchers with other researchers within their own organizations should be encouraged.
3. Travel grants and other incentives should be offered to encourage faculty members to interact with other researchers.
4. Joint research appointments should be encouraged.
5. Visiting research professorships might be allowed for in faculty budgets.
6. Students should do part of their course work outside their own faculty.
7. Forums for the interaction of researchers should be established.
8. Steps should be taken to encourage the formation and retention of links with the research communities of outside of the province.

Factors Related to the Undertaking of Research

1. The possibility of a better use of the summer recess for research activities should be investigated.
2. The establishment and publication of lists of priority areas in educational research should be undertaken. Incentives to both faculty and student researchers who work in priority areas should be provided.

3. Both student and faculty researchers should be offered assistance for the publication of their research findings.

4. Many non-research activities are emphasized by deadlines, scheduled meetings, and the like, such that research activities tend to be set aside. This problem should be studied.

Kinds of Research Being Undertaken

1. The continuation and expansion of research in a variety of organizations should be encouraged, since this will result in a greater variety of types of research undertaken.

2. Attempts to coordinate research done in the different organizations should be made, but not in such a way that researchers feel that their freedom to be creative is threatened.

3. Educational researchers should be encouraged to select topics that are educational in nature, and not to try to duplicate what is already being done by behavioral scientists in other faculties and departments.

4. The tendency to work in areas that have practical implications for professional educators is not at all marked at present. Steps should be taken to change this.

Meeting Needs and Offering Incentives

1. More scholarships and bursaries should be provided for research-oriented students, especially for those undertaking the doctorate.

2. Increased financial support for specific research needs should be made available.

3. Researchers should be given assistance in writing proposals for grants.

4. Sources of funds outside of Quebec should be made accessible to Quebec researchers through information and guidance.

5. Faculties should include in their budgets funds that may be used at least for the development of research projects so that more sophisticated proposals may be directed to other sources of funds.

6. Where faculties are small, assistance should be made available to up-grade the quality of research being done, through improved research design and better statistical and other analyses.

7. Faculties should provide back-up services such as secretaries, typists and assistants, similar to those available in the most productive departments of the university.

8. The I.R.E. or a similar organization should develop and provide access to data banks for student research projects.

9. Steps should be taken to improve bibliographic resources such as microfiches. There is a particular need for information about on-going incomplete research.

10. Information retrieval services similar to ERIC, but including information from a wider range of sources, i.e. French-Canada, France, etc., should be made available.

11. All researchers in Quebec should be provided with rapid access to all library catalogs in the province, and ultimately beyond the province, if possible, through agreements with the Maritimes, Ontario, New England and New-York. Computer systems may be most useful in this.

Training of Researchers

1. We have already suggested that the presence of researchers in a variety of organizations is desirable. However, the amount of publicly founded research in non-teaching organizations should be strictly limited since there is no production of future researchers in such organizations.
2. Within the teaching organizations themselves, authorities should encourage research which heavily involves students, by preferential grants systems.
3. Steps should be taken to encourage increased contact of students with professors on a one-to-one or small group basis. This might include support for research professorships, the provision of research assistantships for students, and other incentives.
4. Training for action research should be included in the professional graduate programs so that those who plan to become teachers, counsellors, and administrators, will use their professional activities to learn more about education.
5. Research programs to discover how to make practising teachers more research-oriented, both as producers, assistants and consumers, are needed.

6. The quality of research methods and analytic processes used in educational research, both by students and by professors, should be up-graded.

7. Steps should be taken to improve the research capabilities of summer school students.

Job Opportunities

1. An attempt should be made to develop job opportunities within the province for educational researchers. This might include the creation of research professorships in universities, and research directorships in school boards. Also, an attempt should be made to obtain an inventory of already existing positions in which educational research activities would be desirable.

2. We should beware of any attempt to develop programs within the province adequate to the training of all our educational researchers. It is good to import and to export researchers and we should try not to be parochial in this field.

APPENDICES

APPENDIX III-1

POPULATION STUDIED IN CHAPTER III: SCHOOLS AND DEGREES IN WHICH STUDENTS WERE ENROLLED IN MARCH 1969 - FULL-TIME AND PART-TIME

	UNIVERSITIES							
FACULTIES OR SCHOOLS Degree	A %	B %	C %	D %	E %	F %	G* %	TOTAL %
EDUCATION								
Doctorate	7	3	2	0	0	0	60	6
Master's	8	93	8	100	6	80	0	32
Licence	40	0	44	0	67	0	0	29
Guidance Certificate	0	3	0	0	0	0	0	1
Diplôme de L'É.N.S.	0	0	9	0	0	0	0	3
CAPES	0	0	0	0	20	0	0	0
PSYCHOLOGY								
Doctorate & Master's	6	1	36	0	0	20	20	15
SOCIAL SCIENCES								
Doctorate & Master's	2	0	1	0	6	0	0	1
ÉCOLE NORMALE SUPÉRIEURE	36	0	0	0	0	0	0	12
OTHER	0	0	0	0	0	0	20	0
Number of Respondents	298	206	304	28	15	20	28	899

* Quebec residents pursuing degrees outside the Province.

APPENDIX III-2

Q. 7 Use the list below to indicate the degrees you have already obtained and the one you are currently working towards.

PART-TIME STUDENTS	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
UNDERGRADUATE DEGREES								
Nil	10	13	2	1	14	9	26	7
One	51	67	121	73	65	40	237	59
Two or more	15	20	42	25	83	51	140	35
TOTAL	76		165		162		403	
OTHER DEGREES WITHOUT THESIS REQUIREMENT								
LICENCE								
Completed	33	43	6	4	66	41	105	26
Course work in progress	9	12	4	2	73	45	86	21
TOTAL	42	55	10	6	139	86	191	47
MASTER'S								
Completed	2	3	19	12	1	1	22	5
Course work in progress	4	5	89	54	0	0	93	23
TOTAL	6	8	108	65	1	1	115	28
DOCTORATE								
Course work in progress	2	3	0	0	1	1	3	1
TOTAL	2	3	0	0	1	1	3	1
OTHER DEGREES REQUIRING THESIS								
LICENCE								
Completed	19	25	1	1	11	7	31	8
Lacking only thesis	2	3	0	0	2	1	4	1
Course work in progress	0	0	0	0	2	1	2	0
TOTAL	21	28	1	1	15	9	37	9
MASTER'S								
Completed	6	8	10	6	0	0	16	4
Lacking only thesis	6	8	26	16	5	3	37	9
Course work in progress	10	13	16	10	2	1	28	7
TOTAL	22	29	52	32	7	4	81	20
DOCTORATE								
Lacking only thesis	12	16	2	1	11	7	25	6
Course work in progress	3	4	3	2	0	0	6	1
TOTAL	15	20	5	3	11	7	31	8
OTHER DEGREES	20	26	9	5	17	10	46	11

APPENDIX III-3

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

FULL-TIME STUDENTS TEACHING Experience in years	UNIVERSITIES A N	 %	 B N	 %	 C N	 %	TOTAL N	 %
ELEMENTARY								
0	10	5	2	6	11	8	23	6
1	9	4	1	3	3	2	13	3
2	5	2	5	16	5	4	15	4
3 - 5	11	4	5	16	6	4	22	6
6 - 10	6	3	2	6	5	4	13	3
More than 10	1	0	1	3	2	1	4	1
SECONDARY								
0	10	5	1	3	9	7	20	5
1	21	10	0	0	14	10	35	9
2	7	3	2	6	3	2	12	3
3 - 5	17	8	12	37	12	8	41	10
6 - 10	12	5	4	12	6	4	22	6
More than 10	8	4	4	12	7	5	19	5
CEGEP & POST-SECONDARY								
0	11	5	4	13	9	7	24	6
1	5	2	0	0	7	5	12	3
2	1	0	0	0	7	5	8	2
3 - 5	11	5	0	0	1	1	12	3
6 - 10	4	2	1	3	5	4	10	3
More than 10	1	0	0	0	0	0	1	0
UNIVERSITY & COLLEGE								
0	12	5	4	13	11	8	27	7
1	7	3	1	3	6	4	14	4
2	3	1	0	0	0	0	3	1
3 - 5	2	1	1	3	1	1	4	1
6 - 10	1	0	0	0	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
Number of Respondents	220		32		137		389	

APPENDIX III - 4

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

PART-TIME STUDENTS	UNIVERSITIES							
TEACHING	A		B		C		TOTAL	
Experience in years	N	%	N	%	N	%	N	%
ELEMENTARY								
0	2	3	11	7	7	4	20	5
1	3	4	14	8	19	12	36	9
2	4	5	13	8	6	4	23	6
3 - 5	12	16	32	9	27	17	61	18
6 - 10	2	3	22	13	20	12	44	11
More than 10	1	1	9	5	12	7	22	5
SECONDARY								
0	1	1	4	2	1	1	6	1
1	15	20	6	4	12	7	33	8
2	8	11	11	7	11	7	30	7
3 - 5	15	20	52	32	51	31	118	29
6 - 10	6	8	43	26	36	22	85	21
More than 10	6	8	19	11	16	10	41	10
CEGEP & POST-SECONDARY								
0	1	1	15	9	12	7	28	7
1	12	12	1	1	5	3	18	4
2	7	9	1	1	3	2	11	3
3 - 5	1	1	2	1	7	4	10	2
6 - 10	5	7	1	1	6	4	12	3
More than 10	0	0	0	0	2	1	2	0
UNIVERSITY & COLLEGE								
0	1	1	16	10	14	9	31	8
1	6	8	4	2	0	0	10	2
2	1	1	3	2	2	1	6	1
3 - 5	4	5	3	2	2	1	9	2
6 - 10	1	1	1	1	0	0	2	0
More than 10	0	0	0	0	0	0	0	0
Number of Respondents	76		165		162		403	

APPENDIX III-5

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

FULL-TIME STUDENTS	UNIVERSITIES							
ADMINISTRATION	A		B		C		TOTAL	
Experience in years	N	%	N	%	N	%	N	%
ELEMENTARY								
0	11	5	3	9	12	9	26	7
1	0	0	0	0	2	1	2	1
2	0	0	2	6	1	1	3	1
3 - 5	2	1	0	0	2	1	4	1
6 - 10	0	0	1	3	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
SECONDARY								
0	11	5	4	13	11	8	26	7
1	2	1	0	0	0	0	2	1
2	3	1	0	0	4	3	7	2
3 - 5	3	1	0	0	1	1	4	1
6 - 10	0	0	1	3	1	1	2	1
More than 10	1	0	0	0	2	1	3	1
CEGEP & POST-SECONDARY								
0	11	5	4	13	11	8	26	7
1	3	1	0	0	1	1	4	1
2	1	0	0	0	1	1	2	1
3 - 5	0	0	0	0	2	1	2	1
6 - 10	1	0	0	0	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
UNIVERSITY & COLLEGE								
0	11	5	4	13	12	9	27	7
1	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3 - 5	0	0	0	0	1	1	1	0
6 - 10	1	0	0	0	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
Number of Respondents	220		32		137		389	

APPENDIX III-6

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

PART-TIME STUDENTS ADMINISTRATION Experience in years	UNIVERSITIES A N	 %	 B N	 %	 C N	 %	TOTAL N	 %
ELEMENTARY								
0	1	1	14	8	11	7	26	6
1	0	0	7	4	4	2	11	3
2	0	0	10	6	5	3	15	4
3 - 5	5	7	11	7	8	5	24	6
6 - 10	1	1	5	3	4	2	10	2
More than 10	0	0	0	0	1	1	1	0
SECONDARY								
0	1	1	15	9	12	7	28	7
1	4	5	5	3	8	5	17	4
2	2	3	11	7	4	2	17	4
3 - 5	5	7	10	6	8	5	23	6
6 - 10	1	1	6	4	2	1	9	2
More than 10	1	1	1	1	0	0	2	0
CEGEP & POST-SECONDARY								
0	1	1	16	10	13	8	30	7
1	1	1	0	0	3	2	4	1
2	0	0	0	0	3	2	3	1
3 - 5	2	3	1	1	3	2	6	1
6 - 10	1	1	0	0	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
UNIVERSITY & COLLEGE								
0	1	1	16	10	14	9	31	8
1	0	0	0	0	0	0	0	0
2	1	1	0	0	2	1	3	1
3 - 5	1	1	1	1	0	0	2	0
6 - 10	0	0	1	1	0	0	1	0
More than 10	0	0	0	0	0	0	0	0
Number of Respondents	76		165		162		403	

APPENDIX III-7

Q. 10 Have you had any experience in any of the following activities? Count as one year of EXPERIENCE, an academic year when you devoted more than half or your time to the following:

FULL-TIME STUDENTS	UNIVERSITIES							
	A		B		C		TOTAL	
RESEARCH Experience in years	N	%	N	%	N	%	N	%
0	10	5	3	9	6	4	19	5
1	11	5	7	22	20	15	38	10
2	11	5	0	0	11	8	22	6
3 - 5	1	0	0	0	8	6	9	2
Total	33	15	10	31	45	33	88	23
INDUSTRIAL & PROFESSIONAL Experience in years								
0	9	4	3	9	7	5	19	5
1	0	0	2	6	4	3	6	2
2	2	1	1	3	0	0	3	1
3 - 5	0	0	0	0	0	0	0	0
Total	11	5	6	18	11	8	28	8
Number of Respondents	220		32		137		389	

PART-TIME STUDENTS	A		B		C		TOTAL	
RESEARCH Experience in years								
0	2	3	17	10	14	9	33	8
1	9	12	7	4	7	4	23	6
2	4	5	0	0	4	2	8	2
3 - 5	2	3	2	1	3	2	7	2
Total	18	24	26	15	30	18	74	19
INDUSTRIAL & PROFESSIONAL Experience in years								
0	0	0	16	10	12	7	28	7
1	2	3	0	0	2	1	4	1
2	0	0	1	1	1	1	2	0
3 - 5	0	0	0	0	0	0	0	0
Total	2	3	17	11	15	9	34	8
Number of Respondents	76		165		162		403	

APPENDIX III-8

Q. 15 (Is there a research requirement for the degree you are pursuing?) If YES, how important do you and your professors consider it to be?

STUDENTS' OPINION	UNIVERSITIES							
IMPORTANCE OF RESEARCH REQUIREMENT	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
EXTREMELY IMPORTANT								
Full-time students	58	26	10	31	49	36	117	30
Part-time students	27	36	29	18	31	19	87	22
VERY IMPORTANT								
Full-time students	69	31	10	31	56	41	135	35
Part-time students	24	32	23	14	49	30	96	24
MODERATELY IMPORTANT								
Full-time students	44	20	4	13	22	16	70	18
Part-time students	6	8	14	8	21	13	41	10
ONLY SLIGHTLY IMPORTANT								
Full-time students	5	2	1	3	1	1	7	2
Part-time students	1	1	3	2	0	0	4	1
JUST A FORMALITY								
Full-time students	1	0	0	0	2	1	3	1
Part-time students	1	1	1	1	2	1	4	1
Number of full-time students	220		32		137		389	
Number of part-time students	76		165		162		403	

APPENDIX III-9

Q. 15 (Is there a research requirement for the degree you are pursuing?) If YES, how important do you and your professors consider it to be?

PERCEIVED OPINION OF PROFESSORS IMPORTANCE OF RESEARCH REQUIREMENT	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
EXTREMELY IMPORTANT								
Full-time students	54	25	10	31	47	34	111	29
Part-time students	20	26	28	17	24	15	72	18
VERY IMPORTANT								
Full-time students	66	30	9	28	59	43	134	34
Part-time students	26	34	19	12	42	26	87	22
MODERATELY IMPORTANT								
Full-time students	42	19	4	13	16	12	62	16
Part-time students	7	9	13	8	27	17	47	12
ONLY SLIGHTLY IMPORTANT								
Full-time students	4	2	1	3	2	1	7	2
Part-time students	0	0	2	1	1	1	3	1
JUST A FORMALITY								
Full-time students	2	1	0	0	1	1	3	1
Part-time students	1	1	1	1	1	1	3	1
Number of full-time students	220		32		137		389	
Number of part-time students	76		165		162		403	

APPENDIX III-10

Classification of comments made in response to question 30:

> "There is controversy as to the relative merits of (a) a graduate degree devoted to promoting professional competence in a specialized area such as administration, guidance, or teaching methods, and not requiring original research resulting in a thesis; and (b) a graduate degree in which original research is a requirement, and training is given which leads to the production of original research and a thesis.
> For purposes of this study we shall refer to (a) as a professional degree and to (b) as a research degree. Are you in favour, for your university, of a system of degrees in Education which reflects the distinction between the two types of training defined above?"

YES

Distinction useful: → choice according to aptitudes & interests → degrees indicating area of competence	154
A research degree should be considered superior	8
Yes, provided . closely supervised internship . contacts beween two areas . there is no danger of discrimination against one type of degrees . distinction be made only in last year . emphasis on (a) (professional) . both types be accessible to all students	51
Total "YES"	213

NO

Both types of training necessary: they are complementary and must be coordinated	53
All degrees should require research work and include training for research	44
Distinction detrimental: . discrimination . unawareness of other area	15
No need for such a distinction (we get both types of training in our faculty)	12
Total "NO"	124

Distinction only at Doctoral level	3
Distinction only at Master's level	8
No research at M's level, only research at D's level	4
	15

N.B. Responses from full-time and part-time students in six universities.

APPENDIX III-11

Classification of comments to question 23:

> "If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?"

YES	
"Provided it would correspond to my field of interest or competence"	70
"Provided I could see the proposed subjects as priorities too"	4
"Provided they met academic standards, and we had supervisors"	1
Yes - without condition	
. it would be a very good initiative (without specific reason)	46
. because it would make our research more useful, less theoretical, we could work within a general plan	34
. because one needs funds to do research	14
. we need information on ongoing and completed research	13
. because it would help me to define my project (or projects)	5
Total "YES"	187

NO	
"My field of interest is already determined"	18
Such a list would be useless (or biased)	8
"My research will not be in education"	7
"I once asked the IRE for information on priority needs and they did not indicate any"	4
"We don't need any more information (There are enough prof. journals)"	2
"I am not planning to do any research"	2
"You should see to social integration of programmes"	1
"Academic freedom is more important than "planification" by "amateur sociologists"	1
Total "NO"	43

PERHAPS	14
MAYBE LATER	6
LITTLE	4

N.B. Responses from full-time and part-time students in six universities.

APPENDIX III-12

Q. 18 (Do you obtain financial assistance in any of the following forms?). If YES, amount per academic year?

FORMS OF FINANCIAL ASSISTANCE Full-time or part-time students Amounts	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
TEACHING ASSISTANTSHIP								
Full-time students								
1 - 1000	3	1	2	6	4	3	9	2
1001 - 10 000	5	2	7	22	8	6	20	5
Part-time students								
1 - 1000	1	1	1	1	4	2	6	1
1001 - 10 000	6	8	2	1	4	2	12	3
RESEARCH ASSISTANTSHIP								
Full-time students								
1 - 1000	5	2	2	6	4	2	11	3
1001 - 10 000	5	2	2	6	9	7	16	4
Part-time students								
1 - 1000	1	1	0	0	0	0	1	0
1001 - 10 000	1	1	0	0	1	1	2	0
SCHOLARSHIP (non-repayable)								
Full-time students								
1 - 1000	9	4	0	0	5	4	14	4
1001 - 10 000	42	19	4	13	47	34	93	24
Part-time students								
1 - 1000	1	1	5	3	8	5	14	3
1001 - 10 000	1	1	1	1	3	2	5	1
BURSARY (repayable at least in part)								
Full-time students								
1 - 1000	67	30	1	3	17	12	85	22
1001 - 10 000	23	10	1	3	8	6	32	8
Part-time students								
1 - 1000	0	0	3	2	1	1	4	1
1001 - 10 000	0	0	0	0	0	0	0	0
RESEARCH GRANT TO ME								
Full-time students								
1 - 1000	0	0	1	3	0	0	1	0
1001 - 10 000	0	0	0	0	2	1	2	1
Part-time students								
1 - 1000	0	0	2	1	0	0	2	0
1001 - 10 000	0	0	0	0	0	0	0	0
RESEARCH GRANT TO A FACULTY MEMBER								
Full-time students								
1 - 1000	3	1	2	6	1	1	6	2
1001 - 10 000	2	1	2	6	1	1	5	1
Part-time students								
1 - 1000	1	1	0	0	0	0	1	0
1001 - 10 000	0	0	0	0	0	0	0	0
OTHER								
Full-time students								
1 - 1000	4	2	0	0	2	1	6	2
1001 - 10 000	3	1	3	9	4	3	10	3
Part-time students								
1 - 1000	0	0	5	3	5	3	10	2
1001 - 10 000	6	8	1	1	5	3	12	3

APPENDIX III-13

Classification of responses to question 47:

> "In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions."

94 referred to funds:

- 58 to grants in general
- 10 to research budget for the faculty
- 23 to scholarships & bursaries
- 3 to research budget in school boards

22 mentioned coordination, seldom referring to any specific authority
19 wished that the Department of Education publish a list of priorities or inform them on needs for research
5 mentioned more communication between faculties and departments
21 expressed the need for communication with other researchers: conferences, seminars, correspondence, etc.

62 indicated a need for information on research
- 32 specified information on on-going research
- 30 specified information on research results

43 wished to be able to work in teams on big projects - ("interdisciplinary teams" often specified)

32 suggested "freedom from teaching", referring either to university professors or to teachers who wish to conduct research as students or on their individual initiative

12 only wished for more time

22 commented on the conditions of thesis supervision
19 referred directly to the competence (or incompetence) of their professors in research
19 wished for a greater accessibility to professors
18 mentioned that the attitudes of their professors were not favorable to research (to students' work or commitment to research)
6 underlined the professor-student ratio, one of them stating: "1 professor/150 students"

16 wished for more introductory courses on research, and course in Research Methods
20 wanted more practical training for research, out of which, 8 had in mind training before the M's level
15 thought that more student assistantships in research would help both professors & students
6 regretted some kind of imprecision and instability of curricula and administrative procedures concerning student research.

APPENDIX III-14

Classification of responses to question 48:

> "Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher? Try to indicate roughly the order of importance of your suggestions."

FUNDS

Grants	99	
Bursaries*	53	
"Sabbatical leaves" for teachers and students	12	
	164	(67%)

INFORMATION

Publication of research results	37	
List of priorities and needs for research	27	
Publication of on-going research	25	
Publicity on research (need, value, advantages)	14	
Information on the activities of these agencies	14	
Information on grants, bursaries, courses of studies	4	
	121	(50%)

TECHNICAL ASSISTANCE

Documentation and information retrieval	23	
Data bank	10	
Facilitation of access to population	6	
Consultants	5	
Secretarial help	5	
Data gathering	4	
Computer services	3	
Library	3	
Equipment	2	
Technical services in general	2	
Research assistants	1	
	68	(28%

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* Many comment on the criteria of selection of candidates to bursaries and scholarships.

APPENDIX III-14 (cont'd.)

COMMUNICATION	
Meetings of researchers	14
Work in interdisciplinary teams	10
Meetings of researchers with practitioners	7
Interdisciplinary meetings for discussion	4
Communication between students and teachers	3
Communication between students and professors	1
	39 (16%)
COORDINATION & PLANNING	15 (6%)
ORGANIZATION OF RESEARCH CENTERS BY GOVERNMENT AGENCIES	
No mention where	8
In universities	1
In CEGEPS	1
In teacher training institutions	1
In regional bureaus of the Department of Education	1
	12 (5%)
ORGANIZATION OF INFORMATION TRAVELS	8
INFLUENCE ON COURSES OF STUDY FOR RESEARCHERS TO BE	8
CREATION OF JOBS FOR RESEARCHERS	3

OTHER

- Influence on application in schools of research findings
- "Kill the school boards"
- Change the spirit of the whole education system
- Incentive to companies which might contribute to the funding of selected research projects

APPENDIX III-15

Q. 31 In your estimate, what is the emphasis given to the research graduate program relative to the professional graduate program in your school?

EMPHASIS Students	UNIVERSITIES A N	%	B N	%	C N	%	TOTAL N	%
EXCESSIVE								
Full-time students	4	2	1	3	9	7	14	4
Part-time students	4	5	11	7	4	2	19	5
SUFFICIENT								
Full-time students	49	22	19	59	66	48	134	34
Part-time students	15	20	83	50	23	14	121	30
INSUFFICIENT								
Full-time students	83	38	4	13	30	22	117	30
Part-time students	28	37	33	20	60	37	121	30
GREATLY INSUFFICIENT								
Full-time students	35	16	3	9	14	10	52	13
Part-time students	9	12	5	3	33	20	47	12
NO RESEARCH PROGRAM								
Full-time students	11	5	1	3	4	3	16	4
Part-time students	4	5	5	3	4	2	13	3
NO PROFESSIONAL PROGRAM								
Full-time students	0	0	0	0	2	1	2	1
Part-time students	2	3	3	2	3	2	8	2
NO RESPONSE								
Full-time students	38	17	4	13	12	9	54	14
Part-time students	14	19	25	16	35	21	74	18
Number of full-time students	220		32		137		389	
Number of part-time students	76		165		162		403	

APPENDIX III-16

Q. 32 There are several issues pertaining to the graduate program in education which are receiving attention these days. Each of the following statements takes a position on one of these issues. Indicate the extent to which you agree or disagree with each statement by placing the appropriate number in the space provided.

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
a) Elementary school teaching is a profession, like law or engineering.								
Strongly agree	102	50	15	48	67	50	184	50
Mostly agree	46	22	11	35	40	30	97	26
Undecided	16	8	0	0	10	7	26	7
Mostly disagree	39	19	4	13	15	11	58	16
Strongly disagree	3	1	1	4	2	2	6	1
Total	206	94	31	97	134	98	371	95
b) The findings of educational research are generally of little help to the classroom teacher.								
Strongly agree	39	19	5	16	28	21	72	19
Mostly agree	61	29	9	29	54	40	124	33
Undecided	46	22	2	6	22	16	70	19
Mostly disagree	50	24	10	32	23	17	83	22
Strongly disagree	13	6	5	16	7	6	25	7
Total	209	95	31	97	134	98	374	96
c) The Ph.D. should be a research degree and the Ed.D. should be a professional degree.								
Strongly agree	22	12	10	32	53	40	85	24
Mostly agree	45	24	10	32	30	23	85	24
Undecided	77	40	3	10	26	20	106	30
Mostly disagree	37	19	4	13	14	11	55	15
Strongly disagree	10	5	4	13	10	6	24	7
Total	191	87	31	97	133	97	355	91
d) We already know so much about the teaching-learning process that the main problem facing us is how better to disseminate this knowledge so that it is used in the schools.								
Strongly agree	18	9	2	6	12	9	32	9
Mostly agree	42	21	10	32	22	16	74	20
Undecided	39	19	1	4	26	19	66	18
Mostly disagree	88	43	14	45	63	47	165	45
Strongly disagree	16	8	4	13	11	9	31	8
Total	203	92	31	97	134	98	368	95

APPENDIX III-16

Q. 32

	UNIVERSITIES							
	A		B		C		TOTAL	
	N	%	N	%	N	%	N	%
e) The research techniques and methods used in educational research tend to lag behind those used in behavioral science generally.								
Strongly agree	30	15	2	6	23	17	55	15
Mostly agree	62	31	16	52	48	36	126	34
Undecided	78	39	8	26	52	39	138	38
Mostly disagree	30	15	5	16	11	9	46	13
Strongly disagree	2	1	0	0	0	0	2	0
Total	202	92	31	97	134	98	367	94
f) Teachers are better qualified to evaluate the results of their teaching than experts who are not in daily contact with the classroom.								
Strongly agree	41	20	5	16	14	10	60	16
Mostly agree	52	25	10	32	25	19	87	23
Undecided	32	15	6	19	29	22	67	18
Mostly disagree	77	37	9	29	59	44	145	39
Strongly disagree	6	3	1	4	7	6	14	4
Total	208	95	31	97	134	98	373	96
g) The Ph.D. generally has higher prestige than the Ed.D.								
Strongly agree	48	25	14	45	52	39	114	32
Mostly agree	50	26	9	29	49	37	108	30
Undecided	72	38	6	19	19	14	97	27
Mostly disagree	16	8	2	6	9	7	27	8
Strongly disagree	6	3	0	0	4	3	10	3
Total	192	87	31	97	133	97	356	92
h) Teachers should be trained to do research on instructional methods in their own classrooms, sometimes called "action research".								
Strongly agree	88	43	17	55	64	47	169	45
Mostly agree	76	37	8	26	42	31	126	34
Undecided	23	11	3	10	21	16	47	13
Mostly disagree	18	9	3	10	8	6	29	8
Strongly disagree	1	0	0	0	0	0	1	0
Total	206	94	31	97	135	98	372	96

APPENDIX III-16

Q. 32

	UNIVERSITIES						TOTAL	
	A		B		C			
	N	%	N	%	N	%	N	%
i) Schools or departments of education generally have low prestige within the universities.								
Strongly agree	53	26	6	19	34	25	93	25
Mostly agree	77	37	15	48	50	37	142	38
Undecided	28	14	3	10	28	21	59	16
Mostly disagree	42	21	7	23	22	16	71	19
Strongly disagree	6	2	0	0	1	1	7	2
Total	206	94	31	97	135	98	372	96
j) Persons who wish to make a career of educational research should receive most of their research training from professors in the behavioral sciences outside schools of education.								
Strongly agree	15	7	1	4	9	7	25	7
Mostly agree	47	23	7	23	39	29	93	25
Undecided	68	34	6	19	51	38	125	34
Mostly disagree	55	27	14	45	29	22	98	27
Strongly disagree	16	9	3	10	6	4	25	7
Total	201	91	31	97	134	98	366	94

APPENDIX III-17

Classification of responses to question 16:

> "Do you plan to carry out research after graduation? Would you describe your plans briefly in terms of questions, problems or hypotheses."

TEACHING METHODS

In general	
Audio-visual methods	24
Teaching method in general	16
CAI & Programmed instruction	11
Activist methods	6
Styles of teaching	2
Tutorship	2
Language laboratories	1
Role of image in education	1
Sound in teaching	1
	64

Specific Methods	
Teaching of French	9
Teaching of History	8
Teaching of Science	7
Teaching of Religion	7
Teaching of Maths	6
Teaching of English	5
Teaching of Geography	4
Teaching of (Family)	3
Teaching of Reading	3
Teaching of Art	2
Teaching of (Food)	1
	55
TOTAL	119

LEARNING

Learning problems	21
Learning in general	14
Learning of Reading	6
Theory of learning	5
Learning of Language	4
Learning of scientific methods	3
Non-intellectual factors of learning	2
Learning of Mathematics	1
	56

STUDENTS

Exceptional children	22
Vocational choice	12
Adjustment to school structure	11
Failure-low achievement	7
Authority (structure, "contestation")	6
Motivation of students	6
School achievement	5
Juvenile delinquency	5
Values of students	4
Satisfaction of students	2
Attitudes of students	2
Drugs	2
Drop-out	2
Special Education	1
	87

APPENDIX III-17 (cont'd.)

PSYCHOLOGY

Abnormal psychology	16
Developmental psychology	11
Psych. of intelligence	9
Psych. of adolescents	7
Psych. of perception	6
Psych. of adjustment	6
Theory of personality	5
Socialization	4
Sexology & sex education	4
Psych. of memory	3
Psych. of French-Canadians	3
Group therapy	3
Sentimentality	1
Psychocybernetics	1
Psycholinguistics	1
Bloom's theory	1
Epistemology of psychology	1
Population who consult psychologists in colleges and universities	2
Training of psychologists	1
	85

GUIDANCE & COUNSELLING

Guidance & vocational education	17
Counselling in general	16
Group counselling	11
Counsellor education	5
	49

FOUNDATIONS OF EDUCATION

Sociology (rel. to Educ.)	21
Communication	10
Psychosocial methods of action	5
Economics (rel. to Educ.)	3
History of Education	3
Comparative Education	3
	45

ADMINISTRATION, SUPERVISION AND FINANCE

Administration in general	11
Human relations in administration	6
How to make "polyvalentes" favourable to human development	5
Attitudes of administration	4
Financing of education	3
Supervision	2
Ungraded schools	2
Regulation No. 1	2
Double timetable	1
Evaluation of schools	1
University administration	1
Building of schools	1
Classification of students at secondary school	1
Factors of regionalization in cities	1
Influence of transport on achievement	1
	42

EVALUATION

Tests and measurement	34
Examinations	7
	41

APPENDIX III-17 (cont'd.)

TEACHERS

Evaluation of teachers	8
Teachers' attitudes	7
Satisfaction of teachers	3
Selection of teachers	2
Mobility of teachers	1
Absenteism of teachers	1
Values of teachers	1
Interest of teachers	1
Legal status	1
	25

INTERPERSONAL RELATIONS

Student-Teacher relations	12
Family relationships	7
Parent-Teacher relations	3
Influence of parents on schools	2
	24

CURRICULUM

Preparation of curriculum	18
Curriculum theory	3
Art education in curriculum	2
	23

POST-SECONDARY EDUCATION

Continuing education	19
Higher education in general	2
CEGEP concept	2
	23

TEACHER EDUCATION

Teacher education in general	15
Practice teaching	2
	17

MISCELLANEOUS

Pressure groups and education	2
Teaching in 1969 and importance of students	1
Influence of sports on development of personality	1
Language rights in education	1
Extra-curricular activities	1
	6

DOCUMENTATION	3
STATISTICS	2

APPENDIX III-18

INSTITUTE OF RESEARCH IN EDUCATION
Department of Education
QUEBEC

INVENTORY OF RESEARCH IN EDUCATION IN QUEBEC

QUESTIONNAIRE FOR STUDENTS

March 1969

1 NAME ____________________ FIRST NAME ____________________ ( ) 01 - 04

2 SEX M ___ 1 F ___ 2 05

3 AGE in years on April 1st 1969 ___ 06 - 07

4 No. of dependents ___ 08 - 09

5 Full-time student ___ 10

Part-time student ___

6 UNIVERSITY

Bishop's University ___1 11
Laval University ___2
McGill University ___3
University of Montreal ___4
University of Sherbrooke ___5
Sir George Williams University ___6
Other ____________________ ___7

SE 2

7 Use the list below to indicate the degrees you have already obtained and the one you are currently working towards.
(Teaching licences or certificates will be entered later)

	FIELD	COLLEGE OR UNIVERSITY	YEAR	
Undergraduate Degrees				
____	____	____	____	12
(specify)				
____	____	____	____	
____	____	____	____	
Other Degrees with no Thesis Requirement				
Licence (French)(No. of credits ____)				
Completed	____	____	____	13
Course work in progress	____	____		14
Master				
Completed	____	____	____	15
Course work in progress	____	____		16
Doctorate				
Course work in progress	____	____		17
Other Degrees Requiring Thesis				
Licence (French)(No. of credits ____)				
Completed	____	____	____	18
Lacking only thesis	____	____		19
Course work in progress	____	____		20
Master				
Completed	____	____	____	21
Lacking only thesis	____	____		22
Course work in progress	____	____		23
Doctorate				
Lacking only thesis	____	____		24
Course work in progress	____	____		25
Other (describe)				
				26
____	____	____	____	
____	____	____	____	
____	____	____	____	

Write in the names of your principal thesis advisers, if any. ____________________
____

8 Professional Teacher Training other than reported before.
(Omit date of Certificate if you took training but did not receive Certificate.)

Name of Certificate	Date of Certificate	Name of Institution or Organization	Province or State	
________	______	________	______	27
________	______	________	______	
________	______	________	______	

9 If you are now working on a Master's degree do you intend to continue towards a doctoral degree? YES ____ NO ____ 28

If "YES", at the same university? YES ____ NO ____ 29

Immediately? YES ____ NO ____ 30

10 Have you had any experience in any of the following activities?
Count as one year of EXPERIENCE, an academic year when you devoted more than half of your time to the following:

		No. of years	
Teaching	elementary	____	31 - 32
	secondary	____	33 - 34
	CEGEP & post-secondary	____	35 - 36
	University and College	____	37 - 38
Administration	elementary	____	39 - 40
	secondary	____	41 - 42
	CEGEP & post-secondary	____	43 - 44
	University and College	____	45 - 46
Research - area or field	____________	____	47 - 48
	____________	____	49 - 50
Industrial & Professional	nature of work ________	____	51 - 52
	____________	____	53 - 54
Other (specify)	____________	____	55 - 56
	____________	____	57 - 58

11 Do you have, in this academic year, any regular personal contact with a particular member of the Faculty of Education on a one-to-one basis in relation to research work?

YES ____ NO ____ 59

12 If "NO", do you ever have such regular personal contact with a faculty member within a group, or team, of no more than five students?

YES ____ NO ____ 60

13 We wish to know something about the courses listed below. Check if they are compulsory for your degree. If they are optional, and you are taking them, or plan to, please indicate that also.

	Compulsory Courses		Optional, but selected anyway		
	YES (1)	NO (2)	YES (1)	NO (2)	
Descriptive Statistics	___	___	___	___	61 - 62
Inferential Statistics	___	___	___	___	63 - 64
Research Design & Methodology	___	___	___	___	65 - 66
Additional Compulsory Courses in Measurement or Methodology					
______________________ (Specify)	___	___	___	___	67 - 68
______________________	___	___	___	___	69 - 70
______________________	___	___	___	___	71 - 72
					END CARD

14 We wish to know why you decided to attend a graduate school in education. If one or more of the following is your reason(s) please check. If there are other reasons, please list them below.

	YES	NO	
a) I wished to teach or do research at the University level.	___	___	05
b) I felt it would lead to professional advancement.	___	___	06
c) I wished to acquire research skills.	___	___	07
d) I felt the need for more preparation before entering my chosen career.	___	___	08
e) I wished to become an administrator.	___	___	09
f) Other (specify) ______________________	___	___	10

Give the two that you consider to be the most important in your case.

1st ______ Letter 2nd ______ Letter 11 - 12

15 Is there a research requirement for the degree you are pursuing?

YES ____ NO ____ 13

If "YES", how important do you and your professors consider it to be?

	You	Your professors	
a) extremely important	___1	___1	14 - 15
b) very important	___2	___2	
c) moderately important	___3	___3	
d) only slightly important	___4	___4	
e) just a formality	___5	___5	

16 Do you plan to carry out research after graduation?

Definitely YES	Probably YES	Uncertain	Probably NOT	Definitely NOT	
___	___	___	___	___	16

If "YES", what portion of your time would you expect to devote to it?

Less than half ___ Half ___ More than half ___ 17

Would you describe your plans briefly in terms of questions, problems or hypotheses.

____

____

____

____

____

17 Along with normal studies towards your degree, are you this year engaged in any of the following activities?

	YES	NO	
a) Teaching	___	___	18
b) Research (other than for your thesis)	___	___	19
c) Internship program	___	___	20
d) Other (specify) ______________________	___	___	21
e) ______________________	___	___	22

18 Do you obtain financial assistance in any of the following forms?

	YES	NO	If YES, amount per academic year	
a) Teaching assistantship				23 - 27
b) Research assistantship				28 - 32
c) Scholarship (non repayable)				33 - 37
d) Bursary (repayable at least in part) (source ______)				38 - 42
e) Research grant to me (source ______)				43 - 47
f) Research grant to a faculty member				48 - 52
g) Other (specify) ______				53 - 57
______				58 - 62
				END CARD

19 You may have already done some research. If so, with respect to the last three most important research projects that you have completed, please provide the following information. Indicate also whether this research was your own, or part of someone else's larger project.

	Date started (approx.)		Date completed (approx.)		Your own project		
					YES	NO	
	MONTH	YEAR	MONTH	YEAR			05 - 13
1st) MAJOR HYPOTHESIS							
	MONTH	YEAR	MONTH	YEAR			14 - 22
2nd) MAJOR HYPOTHESIS							
	MONTH	YEAR	MONTH	YEAR			23 - 31
3rd) MAJOR HYPOTHESIS							

20 In the same way as above, report on projects now under way.

	Date started (approx.)		Date completed (approx.)		Is it your thesis?		
					YES	NO	
	MONTH	YEAR	MONTH	YEAR	___	___	32 - 40
1st) MAJOR HYPOTHESIS							
	MONTH	YEAR	MONTH	YEAR	___	___	41 - 49
2nd) MAJOR HYPOTHESIS							
	MONTH	YEAR	MONTH	YEAR	___	___	50 - 58
3rd) MAJOR HYPOTHESIS							

21 Have the following factors tended to influence your choice of research problems to date? (Check as many as apply)

	YES	NO	
a) Past experience not related to profession or training	___	___	59
b) Training and ability	___	___	60
c) Preoccupations of your department or faculty	___	___	61
d) Availability of funds	___	___	62
e) Current educational problems	___	___	63
f) Problems related to content field you are teaching	___	___	64
g) Research in teaching methods	___	___	65
h) Problems related to faculty-student relations	___	___	66
i) Other ____________ (specify)	___	___	67

Indicate 1st, 2nd, 3rd choice.

1st CHOICE ______ LETTER 2nd CHOICE ______ LETTER 3rd CHOICE ______ LETTER 68 - 70

END CARD 3

22 We would like to know how your research project(s), if any, originated?

	Past research		Current research		
	YES	NO	YES	NO	
a) I have no research project.	___	___	___	___	05 - 06
b) Entirely my own conception.	___	___	___	___	07 - 08
c) It grew out of a particular course.	___	___	___	___	09 - 10
d) It is somewhat related to ongoing research in my Faculty.	___	___	___	___	11 - 12
e) It is actually a part of a larger research project.	___	___	___	___	13 - 14
f) Other ______________________ (specify)	___	___	___	___	15 - 16

23 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

YES ___ NO ___ 17

Comment (if you wish): ________________________________

____

24 Please indicate by checking below, the area in which you hope to work upon completion of your degree.
(Check as many as apply)

	Teach	Practice	Do research	
Educational Administration	___	___	___	18 - 20
Guidance and Counselling	___	___	___	21 - 23
Educational Psychology	___	___	___	24 - 26
Sociology of Education	___	___	___	27 - 29
Child Development	___	___	___	30 - 32
Educational Research	___	___	___	33 - 35
Teaching	___	___	___	36 - 38
Special Education	___	___	___	39 - 41
Curriculum Development	___	___	___	42 - 44
Other (specify) ______________	___	___	___	45 - 47
______________________	___	___	___	48 - 50
______________________	___	___	___	51 - 53

25 From what population(s) are you drawing your data for your research?

	Present Research YES	Present Research NO	Past Projects (last 2 years) YES	Past Projects (last 2 years) NO	
Parents	___	___	___	___	54 - 55
Teachers	___	___	___	___	56 - 57
Administrators	___	___	___	___	58 - 59
Preschool children	___	___	___	___	60 - 61
Grades 1-3 (Primary) pupils	___	___	___	___	62 - 63
Grades 4-6 (Elementary) pupils	___	___	___	___	64 - 65
Grades 7-11 (Secondary) pupils	___	___	___	___	66 - 67
CEGEP students	___	___	___	___	68 - 69
Post-secondary students	___	___	___	___	70 - 71
University students	___	___	___	___	72 - 73
School board members	___	___	___	___	74 - 75
University personnel	___	___	___	___	76 - 77
Others ______________________ (specify)	___	___	___	___	78 - 79

END CARD 4

26 What data gathering methods do you use?
(Check as many as apply.)

	Present Research YES	Present Research NO	Past Projects (last 2 years) YES	Past Projects (last 2 years) NO	
Participant observation	___	___	___	___	05 - 06
Non-participant observation	___	___	___	___	07 - 08
Interview	___	___	___	___	09 - 10
Questionnaire	___	___	___	___	11 - 12
Bibliographic	___	___	___	___	13 - 14
Content analysis	___	___	___	___	15 - 16
Experimental	___	___	___	___	17 - 18
Available Data	___	___	___	___	19 - 20
Standardized tests	___	___	___	___	21 - 22
Others ______________________ (specify)	___	___	___	___	23 - 24
______________________	___	___	___	___	25 - 26

27 What are your analytic approaches?
(Check as many as apply.)

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Historical	___	___	___	___	27 - 28
Comparative	___	___	___	___	29 - 30
Logical	___	___	___	___	31 - 32
Theoretical	___	___	___	___	33 - 34
Statistical (descriptive)	___	___	___	___	35 - 36
Statistical (inferential)	___	___	___	___	37 - 38
Others ______________ (specify)	___	___	___	___	39 - 40
______________	___	___	___	___	41 - 42

28 In your opinion should all faculty members be required to do at least some teaching?

YES ___ NO ___ 43

29 In your opinion should all faculty members be required to do at least some research?

YES ___ NO ___ 44

30 There is controversy as to the relative merits of (a) a graduate degree devoted to promoting professional competence in a specialized area such as administration, guidance, or teaching methods, and not requiring original research resulting in a thesis; and (b) a graduate degree in which original research is a requirement, and training is given which leads to the production of original research and a thesis.

For purposes of this study we shall refer to (a) as a professional degree and to (b) as a research degree.

Are you in favour, for your university, of a system of degrees in Education which reflects the distinction between the two types of training defined above?

YES ___ NO ___ 45

Comment ______________________________

____

31 In your estimate, what is the emphasis given to the research graduate program relative to the professional graduate program in your school?

a) greatly insufficient ____1 46
b) insufficient ____2
c) sufficient ____3
d) excessive ____4
e) there is no research graduate program ____5
f) there is no professional graduate program ____6

32 There are several issues pertaining to the graduate program in education which are receiving attention these days. Each of the following statements takes a position on one of these issues. Indicate the extent to which you agree or disagree with each statement by placing the appropriate number in the space provided.

1- Strongly agree
2- Mostly agree
3- Undecided
4- Mostly disagree
5- Strongly disagree

a) ____ Elementary school teaching is a profession, like law or engineering. 47

b) ____ The findings of educational research are generally of little help to the classroom teacher. 48

c) ____ The Ph.D. should be a research degree and the Ed.D. should be a professional degree. 49

d) ____ We already know so much about the teaching-learning process that the main problem facing us is how better to disseminate this knowledge so that it is used in the schools. 50

e) ____ The research techniques and methods used in educational research tend to lag behind those used in behavioral science generally. 51

f) ____ Teachers are better qualified to evaluate the results of their teaching than experts who are not in daily contact with the classroom. 52

g) ____ The Ph.D. generally has higher prestige than the Ed.D. 53

h) ____ Teachers should be trained to do research on instructional methods in their own classrooms, sometimes called "action research". 54

i) ____ Schools or departments of education generally have low prestige within the universities. 55

j) ____ Persons who wish to make a career of educational research should receive most of their research training from professors in the behavioral sciences outside schools of education. 56

Which three of the issues touched on above are most frequently discussed in your school as problems of the profession?
(Write in the appropriate letters below.)

___ ___ ___ 57 - 59

33 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?
(Check as many as you wish)

a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies". ____ 60

b) Designing new curricula and methods of instruction. ____ 61

c) Evaluating the effectiveness of new curricula and methods. ____ 62

d) Local school surveys (curriculum, financial, plant, etc.) ____ 63

e) Investigating factors which affect the teaching-learning process in the classroom. ____ 64

f) Disseminating new curricula methods of instruction, or other school practices. ____ 65

g) Investigating factors which affect school administration. ____ 66

h) General psychological studies of human learning or development. ____ 67

i) Presenting evidence to legislators of the need for greater support for the schools. ____ 68

j) Developing new tests and measurements. ____ 69

k) Analyzing the key concepts or philosophical assumptions underlying current educational issues. ____ 70

l) Studying the educational research journals for lecture materials. ____ 71

34 Which of the above activities do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research". (Write the appropriate letters in the space below in order of their importance.)

1st ____ 2nd ____ 3rd ____ 72-73-74

END CARD

35 To what extent should other departments and faculties be involved with graduate students pursuing research degrees in Education?
(Check as many as apply.)

	YES	NO	
a) not at all	____	____	05
b) to the extent of providing part of their training	____	____	06
c) to the extent of supervising them in their research when pertinent	____	____	07
d) in evaluating them for the degree	____	____	08
e) Other ____________ (specify)	____	____	09

36 With respect to admissions policy, which of the following requirements are likely to insure greater academic quality of students in graduate programs requiring a research thesis in Education?
(Check as many as you deem necessary.)

Requirements	Graduate Program				
	Master's Level		Doctoral Level		
	YES	NO	YES	NO	
a) professional training	____	____	____	____	10 - 11
b) teaching experience	____	____	____	____	12 - 13
c) high grade point average in undergraduate degree	____	____	____	____	14 - 15
d) Graduate Record Examination or similar test	____	____	____	____	16 - 17
e) letters of recommendation	____	____	____	____	18 - 19
f) no particular requirement other than undergraduate degree	____	____	____	____	20 - 21
g) other ____________________ (specify)	____	____	____	____	22 - 23

37 There is controversy as to who is responsible for the actual conception as well as for the conduct of research in Education. Some educators feel that every classroom teacher should conduct research, whereas others feel that only those with sophisticated training in research at the graduate level should conduct research. Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?
(Check as many as necessary)

	Degree of Involvement				
	NONE	MODERATE	HEAVY	VERY HEAVY	
a) Class Teachers	____	____	____	____	24
b) School Administrators	____	____	____	____	25
c) Professors involved in Teacher Education	____	____	____	____	26
d) Professional Educational Researchers in Faculties of Education	____	____	____	____	27
e) Behavioral Scientists in Faculties of Education	____	____	____	____	28
f) Behavioral Scientists in Other Faculties	____	____	____	____	29
g) Other ____________________ (specify)	____	____	____	____	30

38 Are there financial needs in your research activities which are not being supported by grants?

YES ____ NO ____ 31

If "YES" specify below

PURPOSE FOR WHICH MONEY IS NEEDED	MODERATELY IMPORTANT (1)	IMPORTANT (2)	VERY IMPORTANT (3)	
				32
				33
				34

39 In searching out funds for research, have you made formal applications in the last two years?

YES ____ NO ____ 35

If "YES", to whom did you apply, and to what extent were you successful?

Applied to	Amount requested	Percent received	
			36 - 44
			45 - 53
			54 - 62

40 Do you need any equipment not available to you for your present projects or any that you would like to carry out.

YES ____ NO ____ 63

If "YES" specify below.

EQUIPMENT NEEDED (specify)	MODERATELY IMPORTANT (1)	IMPORTANT (2)	INDISPENSABLE (3)	
				64
				65
				66

END CARD

41 Comment on the availability of bibliographic resources relevant to your research work.

	Locally Available			Available from outside sources e.g. interlibrary loan			
	POOR	ADEQUATE	EXCELLENT	POOR	ADEQUATE	EXCELLENT	
Current journals							05 - 06
Bound periodicals							07 - 08
Research Reports, final							09 - 10
On-going Research, pre-publication							11 - 12
Abstracts							13 - 14
Microfiches							15 - 16
Microfilms							17 - 18
Other ______ (specify)							19 - 20
							21 - 22
							23 - 24

42 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

YES ____ NO ____ 25

If "YES", in what form would you find it most useful?

43 What specialized consultant services and personnel are available to you in your role as researcher?

	NOT NECESSARY IN MY RESEARCH (1)	NOT AVAILABLE (2)	AVAILABLE (3)	
Information retrieval				26
Documentation				27
Data Bank				28
Census-type Data				29
Statistics Adviser				30
Research Design Consultant				31
Computer Services				32
Others (specify)				
				33
				34

44 How accessible is the population from which you would like to draw your data? Please specify the population(s).

POPULATION	NOT ACCESSIBLE (1)	NOT VERY ACCESSIBLE (2)	READILY ACCESSIBLE (3)	DO NOT KNOW (4)	
____	____	____	____	____	35
____	____	____	____	____	36
____	____	____	____	____	37
____	____	____	____	____	38

45 Are there any needs for data that are not met? YES ____ NO ____ 39

If "YES", specify below.

DATA NEEDED	MODERATELY IMPORTANT (1)	IMPORTANT (2)	VERY IMPORTANT (3)	
____	____	____	____	40
____	____	____	____	41
____	____	____	____	42

46 In this academic year to what extent have you worked together with other scientific personnel in your research activities?

PEOPLE YOU WORK WITH:	NEVER (1)	SELDOM (2)	OFTEN (3)	VERY OFTEN (4)	
a) Researchers in other organizations	____	____	____	____	43
b) Professors in your Faculty	____	____	____	____	44
c) Research Assistants (not students)	____	____	____	____	45
d) Research Assistants (students)	____	____	____	____	46
e) Student Aides	____	____	____	____	47
f) Consultant (specify field)					
____	____	____	____	____	48
____	____	____	____	____	49
g) Other ____ (specify)	____	____	____	____	50
____	____	____	____	____	51
PEOPLE YOU WORK FOR:					
h) as Consultant	____	____	____	____	52
i) as Assistant	____	____	____	____	53
j) Other ____ (specify)	____	____	____	____	54
____	____	____	____	____	55

END CARD

This final section is intended to give you the opportunity to make known any other wishes, observations, opinions, and particularly suggestions which might be useful in the attempt to develop a favorable climate for the conduct of fruitful educational research. This section is therefore not as structured as the rest of the questionnaire, but provides you with blank spaces to tell us the things that we could not have foreseen when we constructed our questionnaire.

47 In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions.

48 Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher? Try to indicate roughly the order of importance of your suggestions.

APPENDIX IV-1

Q. 3 Name of the organization where you work

UNIVERSITY

Bishop's University
Université Laval
McGill University
Université de Montréal
Université de Sherbrooke
Sir George Williams University
Université du Québec

****

SCHOOL BOARDS

C.E.C.M. (Montreal Catholic School Commission)
C.S.R. Lac-St-Jean
Protestant School Board of Greater St.Martin
C.S. Ste-Adèle
C.S.R. Youville
C.S. Sherbrooke
C.S. St-Félix-de-Kingsey
C.S.R. Mille-Isles
School Board of Chelsea
Baldwin-Cartier School Commission
C.S.R. Estrie
C.S.R. Saguenay
C.S. La Salle
CECQ (Quebec)
Commission des écoles catholiques de Québec
C.S.R. Le Royer

****

COLLEGES & NORMAL SCHOOLS

Collège Jean-de-Brébeuf
Collège de Maisonneuve
Collège Ste-Marie
École normale Ville-Marie
St.Joseph Teachers College
Thomas More Institute
École normale Notre-Dame-de-Foy
École normale d'enseignement technique
Collège du Vieux-Montréal

****

OTHERS

Quebec Department of Education
Corporation des enseignants du Québec
Provincial Association of Protestant Teachers
Institut de Visiologie
Service d'orientation et de psychologie (St-Jean)
Bell Canada
Institut de cybernétique du Québec
Institut canadien d'éducation des adultes
Centre de développement visuo-moteur
Hôpital Mont-Providence
Centre d'animation, de développement et de recherche en éducation
Financial Research Institute
Montreal Children's Hospital
Others

APPENDIX IV-2

Q. 26 Which of the activities in question 24 do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research".

	CHOSEN AS					
	1st		2nd		3rd	
ITEM	N	%	N	%	N	%
Investigating factors which affect the teaching-learning process in the classroom	26	19	25	18	24	18
Evaluating the effectiveness of new curricula and methods	25	18	27	20	16	12
General psychological studies of human learning or development	22	16	30	22	16	12
Designing new curricula and methods of instruction	18	13	15	11	21	15
Analyzing the key concepts or philosophical assumptions underlying current educational issues	17	12	6	4	10	7
Developing new tests and measurements	2	1	7	5	12	9

APPENDIX IV-3

Q. 6 Give a complete list of your DEGREES below.

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
DEGREES WITHOUT THESIS REQUIREMENT										
LICENCE										
Completed	8	11	6	29	9	60	3	12	26	19
Course work in progress	1	1	1	5	2	13	0	0	4	3
TOTAL	9	12	7	33	11	73	3	12	30	22
MASTER'S										
Completed	8	11	2	10	1	7	1	4	12	9
Course work in progress	0	0	0	0	0	0	0	0	0	0
TOTAL	8	11	2	10	1	7	1	4	12	9
DOCTORATE										
Completed	1	1	0	0	1	7	2	8	4	3
Course work in progress	1	1	0	0	0	0	0	0	1	1
TOTAL	2	3	0	0	1	7	2	8	5	4
DEGREES REQUIRING THESIS										
LICENCE										
Completed	11	15	5	24	2	13	7	27	25	18
Lacking only thesis	0	0	2	10	0	0	0	0	2	1
Course work in progress	0	0	0	0	0	0	0	0	0	0
TOTAL	11	15	7	33	2	13	7	27	27	20
MASTER'S										
Completed	44	59	3	14	4	27	9	35	60	44
Lacking only thesis	3	4	2	10	3	20	1	4	9	7
Course work in progress	1	1	1	5	2	13	0	0	4	3
TOTAL	48	64	6	29	9	60	10	38	73	53
DOCTORATE										
Completed	45	60	2	10	5	33	4	15	56	41
Lacking only thesis	15	20	2	10	3	20	4	15	24	18
Course work in progress	2	3	1	5	0	0	0	0	3	2
TOTAL	62	83	5	25	8	53	8	30	83	61
OTHER DEGREES										
1	5	7	3	14	4	27	3	12	15	11
2	5	7	2	10	1	7	3	12	11	8
3	1	1	0	0	0	0	1	4	2	1
TOTAL	11	16	5	24	5	33	7	27	28	20
Number of Respondents	75		21		15		26		137	

APPENDIX IV-4

Q. 8 Count as one year of experience a (academic) year when you devoted more than half of your time to the following activities: Industrial & Professional

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
YEARS	N	%	N	%	N	%	N	%	N	%
0	55	73	19	90	11	73	14	54	99	72
1 - 2	11	15	0	0	2	13	4	15	17	12
3 -10	6	8	2	10	2	13	6	23	16	12
More than 10	3	4	0	0	0	0	2	8	5	4
Number of Respondents	75		21		15		26		137	

APPENDIX IV-5

Q. 29 There is controversy as to who is responsible for the actual conception as well as for the conduct of research in Education. Some educators feel that every classroom teacher should conduct research, whereas others feel that only those with sophisticated training in research at the graduate level should conduct research. Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?

Degree of involvement	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
CLASS TEACHERS										
Very Heavy	4	5	1	5	0	0	3	12	8	6
Heavy	8	11	3	14	4	27	8	31	23	17
Moderate	38	51	11	52	7	47	11	42	67	49
None	4	5	1	5	0	0	1	4	6	4
No response	21	28	5	24	4	27	3	12	33	24
SCHOOL ADMINISTRATORS										
Very Heavy	2	3	0	0	0	0	0	0	2	1
Heavy	5	7	5	24	4	27	5	19	19	14
Moderate	32	43	6	29	3	20	14	54	55	40
None	10	13	3	14	2	13	2	8	17	12
No response	26	35	7	33	6	40	5	19	44	32
PROFESSORS INVOLVED IN TEACHER EDUCATION										
Very Heavy	16	21	6	29	6	40	8	31	36	26
Heavy	32	43	7	33	5	33	14	54	58	42
Moderate	12	16	2	10	0	0	2	8	16	12
None	0	0	1	5	0	0	0	0	1	1
No response	15	20	5	24	4	27	2	8	26	19
PROFESSIONAL EDUCATIONAL RESEARCHERS IN FACULTIES OF EDUCATION										
Very Heavy	49	65	15	71	10	67	19	73	93	68
Heavy	10	13	1	5	2	13	4	15	17	12
Moderate	1	1	0	0	0	0	0	0	1	1
None	15	20	5	24	3	20	3	12	26	19
No response	0	0	0	0	0	0	0	0	0	0
BEHAVIORAL SCIENTISTS IN FACULTIES OF EDUCATION										
Very Heavy	46	61	13	62	5	33	19	73	83	61
Heavy	9	12	2	10	3	20	3	12	17	12
Moderate	3	4	0	0	1	7	1	4	5	4
None	1	1	0	0	0	0	0	0	1	1
No response	16	21	6	29	6	40	3	12	31	23
BEHAVIORAL SCIENTISTS IN OTHER FACULTIES										
Very Heavy	42	56	9	43	4	27	12	46	67	49
Heavy	12	16	3	14	2	13	7	27	24	18
Moderate	5	7	4	19	3	20	2	8	14	10
None	1	1	0	0	0	0	0	0	1	1
No response	15	20	5	24	6	40	5	19	31	23
OTHER										
Very Heavy	17	23	7	33	3	20	8	31	35	26
Heavy	11	15	1	5	3	20	3	12	18	13
Moderate	1	1	0	0	1	7	0	0	2	1
None & No Response	46	61	13	62	8	53	15	58	82	61

APPENDIX IV-6

Q. 33 In searching out funds for research, have you made formal applications in the last two years?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
AMOUNT RESQUESTED	N	%	N	%	N	%	N	%	N	%
$ 1 - 1000	0	0	0	0	0	0	0	0	0	0
$ 1001 - 3000	5	7	2	10	2	13	2	8	11	8
$ 3001 - 5000	3	4	0	0	0	0	1	4	4	3
$ 5001 - 7000	5	7	0	0	0	0	1	4	6	4
$ 7001 - 10 000	4	5	0	0	1	7	2	8	7	5
More than $10 000	9	12	6	29	1	7	5	19	21	15
Total	26	35	8	38	4	27	11	42	49	36
Number of Respondents	75		21		15		26		137	

APPENDIX IV-7

Q. 14 As far as you know in which of the following areas, if any, is research now being undertaken in your faculty or organization?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
GENERAL	N	%	N	%	N	%	N	%	N	%
School finance	3	4	1	5	1	7	8	31	13	9
Educational administration or organization (other than finance)	4	5	2	10	1	7	8	31	15	11
Tests and measurements	33	44	12	57	4	27	6	23	55	40
Other research methodology	25	33	1	5	3	20	8	31	37	27
Guidance and counseling	16	21	3	14	1	7	4	15	24	18
Methods of instruction	31	41	8	38	6	40	12	46	57	42
Talent, creativity of students	14	19	0	0	3	20	5	19	22	16
Special education	12	16	4	19	1	7	7	27	24	18
Psychology of learning	36	48	4	19	3	20	4	15	47	34
Child development	31	41	1	5	1	7	7	27	40	29
Adolescent development	21	28	1	5	0	0	2	8	24	18
School-Community relations	10	13	1	5	2	13	6	23	19	14
Teacher personality	7	9	2	10	3	20	6	23	18	13
Teaching as a profession	5	7	1	5	2	13	9	35	17	12
History of education	2	3	0	0	0	0	3	12	5	4
Comparative education	4	5	0	0	2	13	1	4	7	5
Programmed instruction	6	8	2	10	1	7	2	8	11	8
Educational technologies	12	16	2	10	2	13	7	27	23	17
Philosophy of education	4	5	0	0	2	13	6	23	12	9
Teacher training research	10	13	3	14	4	27	7	27	24	18
Sub-cultural differences of students	10	13	2	10	0	0	4	15	16	12
CURRICULUM RESEARCH IN:										
Mathematics	7	9	2	10	1	7	1	4	11	8
Natural sciences	1	1	0	0	3	20	1	4	5	4
Social studies	2	3	0	0	4	27	1	4	7	5
Reading	1	1	4	19	3	20	3	12	11	8
Foreign languages	7	9	0	0	2	13	0	0	9	7
Other language arts	6	8	1	5	5	33	2	8	14	10
Business and distributive education	1	1	0	0	0	0	0	0	1	1
Physical education	4	5	0	0	1	7	5	19	10	7
Other	14	19	4	19	7	47	7	27	32	23
Number of Respondents	75		21		15		26		137	

APPENDIX IV-8

Q. 14 As far as you know in which of the following areas, would you like to see more research?

	UNIV		SCH B		C N.S		OTHERS		TOTAL	
GENERAL	N	%	N	%	N	%	N	%	N	%
School finance	6	8	1	5	1	7	4	15	12	9
Educational administration or organization (other than finance)	10	13	3	14	4	27	7	27	24	18
Tests and measurements	20	27	8	38	7	47	3	12	38	28
Other research methodology	16	21	5	24	4	27	10	38	35	26
Guidance and counseling	15	20	6	29	6	40	4	15	31	23
Methods of instruction	32	43	10	48	7	47	9	35	58	42
Talent, creativity of students	21	28	3	14	6	40	12	46	42	31
Special education	16	21	8	38	4	27	4	15	32	23
Psychology of learning	33	44	14	67	4	27	8	31	59	43
Child development	23	31	11	52	3	20	6	23	43	31
Adolescent development	14	19	7	33	3	20	6	23	30	22
School-community relations	18	24	7	33	4	27	11	42	40	29
Teacher personality	13	17	8	38	5	33	9	35	35	26
Teaching as a profession	9	12	6	29	4	27	8	31	27	20
History of education	3	4	0	0	2	13	4	15	9	7
Comparative education	6	8	2	10	3	20	3	12	14	10
Programmed instruction	18	24	7	33	7	47	4	15	36	26
Educational technologies	15	20	4	19	4	27	8	31	31	23
Philosophy of education	9	12	2	10	4	27	9	35	24	18
Teacher training research	16	21	9	43	6	40	9	35	40	29
Sub-cultural differences of students	16	21	5	24	4	27	4	15	29	21
CURRICULUM RESEARCH IN:										
Mathematics	4	5	6	29	5	33	4	15	19	14
Natural sciences	2	3	2	10	5	33	2	8	11	8
Social studies	2	3	1	5	4	27	2	8	9	7
Reading	2	3	8	38	5	33	4	15	19	14
Foreign languages	7	9	2	10	2	13	2	8	13	9
Other language arts	6	8	3	14	4	27	2	8	15	11
Business & distr. education	1	1	1	5	3	20	2	8	7	5
Physical education	6	8	1	5	2	13	4	15	13	9
Other	17	23	8	38	2	13	5	19	32	23
Number of Respondents	75		21		15		26		137	

APPENDIX IV-9

Q. 40 Indicate the personnel available to you in your role as researcher.

PERSONNEL Availability	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
SECRETARY										
Available	39	52	9	43	8	53	18	69	74	54
Not available	12	16	1	5	0	0	1	4	14	10
Not necessary	7	9	1	5	3	20	2	8	13	9
TYPIST										
Available	47	63	10	48	7	47	19	73	83	61
Not available	9	12	1	5	1	7	2	8	13	9
Not necessary	2	3	0	0	2	13	1	4	5	4
GENERAL CLERICAL										
Available	17	23	1	5	2	13	8	31	28	20
Not available	12	16	1	5	2	13	1	4	16	12
Not necessary	17	23	5	24	4	27	10	38	36	26
TRANSLATOR										
Available	10	13	0	0	0	0	8	31	18	13
Not available	15	20	3	14	2	13	1	4	21	15
Not necessary	22	29	5	24	6	40	13	50	46	33
COMPUTER PROGRAMMERS										
Available	41	55	2	10	4	27	10	38	57	42
Not available	7	9	5	24	3	20	7	27	22	16
Not necessary	4	5	3	14	1	7	5	19	13	9
NON-STUDENT RESEARCH ASSISTANTS										
Available	23	31	3	14	2	13	12	46	40	29
Not available	18	24	4	19	3	20	7	27	32	23
Not necessary	7	9	1	5	2	13	3	12	13	9
STUDENT RESEARCH ASSISTANTS										
Available	42	56	3	14	7	47	13	50	65	47
Not available	11	15	3	14	0	0	4	15	18	13
Not necessary	2	3	2	10	2	13	2	8	8	6
GUIDANCE TO SOURCES OF FUNDS										
Available	29	39	0	0	0	0	2	8	31	23
Not available	12	16	5	24	6	40	11	42	34	25
Not necessary	9	12	4	19	1	7	8	31	22	16
TECHNICIANS										
Available	30	40	1	5	2	13	8	31	41	30
Not available	12	16	3	14	3	20	5	19	23	17
Not necessary	7	9	2	10	3	20	6	23	18	13
Number of Respondents	75		21		15		26		137	

APPENDIX IV-10

Q. 35 Comment on the availability of bibliographic resources relevant to your research work.

LOCALLY	UNIV		SCH B		C N.S		OTHERS		TOTAL	
AVAILABLE	N	%	N	%	N	%	N	%	N	%
CURRENT PERIODICALS										
Excellent	16	21	2	10	1	7	6	23	25	18
Adequate	37	49	5	24	3	20	10	38	55	40
Poor	8	11	3	14	4	27	6	23	21	15
No response	14	19	11	52	7	47	4	15	36	26
BOUND PERIODICALS										
Excellent	12	16	2	10	0	0	2	8	16	12
Adequate	26	35	4	19	4	27	10	38	44	32
Poor	17	23	3	14	4	27	7	27	31	23
No response	20	27	12	57	7	47	7	27	46	34
RESEARCH REPORTS (FINAL)										
Excellent	5	7	1	5	0	0	2	8	8	6
Adequate	22	29	2	10	1	7	4	15	29	21
Poor	18	24	3	14	5	33	13	50	39	28
No response	30	40	15	71	9	60	7	27	61	45
ONGOING RESEARCH (PRE-PUBLICATION)										
Excellent	4	5	0	0	0	0	0	0	4	3
Adequate	15	20	1	5	0	0	3	12	19	14
Poor	22	29	3	14	4	27	13	50	42	31
No response	34	45	17	81	11	73	10	38	72	53
ABSTRACTS										
Excellent	9	12	0	0	0	0	1	4	10	7
Adequate	25	33	1	5	1	7	2	8	29	21
Poor	9	12	6	29	3	20	14	54	32	23
No response	32	43	14	67	11	73	9	35	66	48
MICROFICHES										
Excellent	1	1	0	0	0	0	0	0	1	1
Adequate	17	23	0	0	0	0	3	12	20	15
Poor	11	15	2	10	3	20	13	50	29	21
No response	46	61	19	90	12	80	10	38	87	64
MICROFILMS										
Excellent	2	3	0	0	0	0	0	0	2	1
Adequate	24	32	1	5	0	0	3	12	28	20
Poor	11	15	3	14	3	20	13	50	30	22
No response	38	51	17	81	12	80	10	38	77	56
Number of Respondents	75		21		15		26		137	

APPENDIX IV-11

Q. 35 Comment on the availability of bibliographic resources relevant to your research work.

FROM OUTSIDE SOURCES	UNIV		SCH B		C N.S		OTHERS		TOTAL	
	N	%	N	%	N	%	N	%	N	%
CURRENT PERIODICALS										
Excellent	13	17	0	0	0	0	3	12	16	12
Adequate	17	23	3	14	2	13	5	19	27	20
Poor	4	5	2	10	1	7	6	23	13	9
No response	41	55	16	76	12	80	12	46	82	60
BOUND PERIODICALS										
Excellent	11	15	0	0	1	7	4	15	16	12
Adequate	16	21	4	19	2	13	3	12	25	18
Poor	3	4	2	10	1	7	6	23	12	9
No response	45	60	15	71	11	73	13	50	85	62
RESEARCH REPORTS (FINAL)										
Excellent	5	7	0	0	1	7	2	8	8	6
Adequate	14	19	1	5	3	20	1	4	19	14
Poor	5	7	3	14	1	7	7	27	16	12
No response	51	68	17	81	10	67	16	62	94	69
ONGOING RESEARCH (PRE-PUBLICATION)										
Excellent	2	3	0	0	0	0	1	4	3	2
Adequate	11	15	0	0	3	20	1	4	15	11
Poor	10	13	3	14	1	7	7	27	21	15
No response	52	69	18	86	11	73	17	65	99	72
ABSTRACTS										
Excellent	6	8	0	0	1	7	0	0	7	5
Adequate	14	19	0	0	3	20	2	8	19	14
Poor	4	5	3	14	0	0	7	27	14	10
No response	51	68	18	86	11	73	17	65	98	72
MICROFICHES										
Excellent	6	8	0	0	0	0	1	4	7	5
Adequate	10	13	0	0	1	7	1	4	12	9
Poor	4	5	2	10	0	0	8	31	14	10
No response	55	73	19	90	14	93	16	62	105	77
MICROFILMS										
Excellent	6	8	0	0	0	0	1	4	7	5
Adequate	14	19	1	5	1	7	1	4	17	12
Poor	5	7	2	10	0	0	8	31	15	11
No response	50	67	18	86	14	93	16	62	99	72
Number of Respondents	75		21		15		26		137	

APPENDIX IV-12

INSTITUTE OF RESEARCH IN EDUCATION
Department of Education
QUEBEC

QUESTIONNAIRE FOR PROFESSORS AND RESEARCHERS IN EDUCATION AND RELATED FIELDS

May 1969

1 NAME ______________________ FIRST NAME ________________ ( ) 01 - 04

2 SEX M ____ F ____ 05

3 NAME OF THE ORGANIZATION WHERE YOU WORK ______________________________ ( ) 06 - 07

ADDRESS ______________________________
____

4 YOUR OFFICIAL TITLE ______________________________

5 YOUR MAJOR OCCUPATIONAL TASKS (be brief) 08 - 11

____
____
____
____

YOUR EDUCATIONAL BACKGROUND

6 Give a complete list of your DEGREES below.
(Teaching Licenses or Certificates will be entered later.)

	FIELD	COLLEGE OR UNIVERSITY	YEAR		
Undergraduate degrees					
____________	________	____________	____		
(specify) ____________	________	____________	____	( )	12
____________	________	____________	____		
Other Degrees With No Thesis Requirement					
Licence (French)(No.of credits__)					
Completed	________	____________	____	( )	13
Course work in progress	________	____________		( )	14
Master					
Completed	________	____________	____	( )	15
Course work in progress	________	____________		( )	16
Doctorate					
Completed	________	____________	____	( )	17
Course work in progress	________	____________		( )	18
Other Degrees Requiring Thesis					
Licence (French)(No.of credits__)					
Completed	________	____________	____	( )	19
Lacking only thesis	________	____________		( )	20
Course work in progress	________	____________		( )	21
Master					
Completed	________	____________	____	( )	22
Lacking only thesis	________	____________		( )	23
Course work in progress	________	____________		( )	24
Doctorate					
Completed	________	____________	____	( )	25
Lacking only thesis	________	____________		( )	26
Course work in progress	________	____________		( )	27
Other (describe)				( )	28
____________	________	____________	____		
____________	________	____________	____		
____________	________	____________	____		

Write in the names of your principal thesis advisers, if any. ______________________

____

7 PROFESSIONAL TEACHER TRAINING other than reported in 6 above.

(Omit date of Certificate if you took training but did not receive Certificate.)

Name of Certificate	Date of Certificate	Name of Institution or Organization	Province or State	
				( ) 29

YOUR OCCUPATIONAL EXPERIENCE

8 Count as one year of EXPERIENCE a (academic) year when you devoted more than half of your time to the following activities.

		No. of years	
Teaching	elementary		( ) 30 - 31
	secondary		( ) 32 - 33
	CEGEP & Post-secondary		( ) 34 - 35
	University & College		( ) 36 - 37
Administration	elementary		( ) 38 - 39
	secondary		( ) 40 - 41
	CEGEP & Post-secondary		( ) 42 - 43
	University & College		( ) 44 - 45
Research	area or field		( ) 46 - 47
			( ) 48 - 49
			( ) 50 - 51
Industrial & Professional	nature of work		( ) 52 - 53
			( ) 54 - 55
Other (specify)			( ) 56 - 57

YOUR CURRENT ACTIVITIES

9 What percentage of your work week do you spend on research?

______________ % ( ) 58 - 59

10 What other major activities occupy the balance of your work week?

Activities	Per cent	
________ ( )	_______ %	60 - 62
________ ( )	_______ %	63 - 65
________ ( )	_______ %	66 - 68
________ ( )	_______ %	69 - 71

11 Are you associated with any research bureau (Center, Institute, Office, or Lab School for research)? YES____ NO____ 72

Describe nature of association ____________________

____

LEAVE FOR RESEARCH

12 Have you ever been granted a leave of absence to do research?

YES____ NO____ 73

If "YES", what per cent of your salary did you receive while on leave? ____% ( ) 74 - 75

13 If yes, when did you take it? YEAR ____ 76 - 77

What purpose did it serve?

____ **END CARD 1**

____

____

____

____

____

RESEARCH

14 As far as you know in which of the following areas, if any, is research now being undertaken in your faculty or organization, and in which areas would you like to see more research?

	Now		Would like more		
	YES	NO	YES	NO	
General					
School finance					05 - 06
Educational administration or organization (other than finance)					07 - 08
Tests and measurements					09 - 10
Other research methodology					11 - 12
Guidance and counseling					13 - 14
Methods of instruction					15 - 16
Talent, creativity of students					17 - 18
Special education					19 - 20
Psychology of learning					21 - 22
Child development					23 - 24
Adolescent development					25 - 26
School-community relations					27 - 28
Teacher personality					29 - 30
Teaching as a profession					31 - 32
History of education					33 - 34
Comparative education					35 - 36
Programmed instruction					37 - 38
Educational technologies					39 - 40
Philosophy of education					41 - 42
Teacher training research					43 - 44
Sub-cultural differences of students					45 - 46
Curriculum research in:					
Mathematics					47 - 48
Natural sciences					49 - 50
Social studies					51 - 52
Reading					53 - 54
Foreign languages					55 - 56
Other language arts					57 - 58
Business and distributive education					59 - 60
Physical education					61 - 62
Other (what?) ______________					63 - 64
______________					65 - 66

END CARD 2

15 With respect to the last three most important research projects that you have completed, please provide the following information

Date started (approx.)		Date completed (approx.)		Was it your thesis?		
				YES	NO	
MONTH	YEAR	MONTH	YEAR			05 - 13

1st) MAJOR HYPOTHESIS

MONTH	YEAR	MONTH	YEAR			14 - 22

2nd) MAJOR HYPOTHESIS

MONTH	YEAR	MONTH	YEAR			23 - 31

3rd) MAJOR HYPOTHESIS

16 Using the same format please round out the list of research completed in the last two (academic) years (if any) which has not already been listed in the previous question.

Date started (approx.)		Date completed (approx.)		Was it your thesis?		
				YES	NO	
MONTH	YEAR	MONTH	YEAR			32 - 40

1st) MAJOR HYPOTHESIS

MONTH	YEAR	MONTH	YEAR			41 - 49

2nd) MAJOR HYPOTHESIS

MONTH	YEAR	MONTH	YEAR			50 - 58

3rd) MAJOR HYPOTHESIS

CR 7

17 In the same way as above, report on projects now under way. In the event that a question or hypothesis is directly related to the thesis of one of your students, write the name of that student in parentheses following the statement of the question or hypothesis.

	Date started (approx.)		Date completed (approx.)		Is it your thesis?		
					YES	NO	
	MONTH	YEAR	MONTH	YEAR	____	____	59 - 67

1st) MAJOR HYPOTHESIS ____________________

____

	MONTH	YEAR	MONTH	YEAR	____	____	68 - 76

2nd) MAJOR HYPOTHESIS ____________________

____

END CARD 3

	MONTH	YEAR	MONTH	YEAR	____	____	05 - 13

3rd) MAJOR HYPOTHESIS ____________________

____

18 Do you have any research plans related to the field of education for the next two years?

YES ____ NO ____ 14

If "yes", would you describe them briefly in terms of questions, problems or hypotheses.

____

____

____

____

____

19 From what population(s) are you drawing your data for your research?

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Parents	___	___	___	___	15 - 16
Teachers	___	___	___	___	17 - 18
Administrators	___	___	___	___	19 - 20
Preschool children	___	___	___	___	21 - 22
Grades 1-3 (Primary) pupils	___	___	___	___	23 - 24
Grades 4-6 (Elementary) pupils	___	___	___	___	25 - 26
Grades 7-11(Secondary) pupils	___	___	___	___	27 - 28
CEGEP students	___	___	___	___	29 - 30
Post-secondary students	___	___	___	___	31 - 32
University students	___	___	___	___	33 - 34
School board members	___	___	___	___	35 - 36
University personnel	___	___	___	___	37 - 38
Others ______________________ (specify)	___	___	___	___	39 - 40

20 What data gathering methods do you use?
Exclude student projects which are not a part of your own basic research. (Check as many as apply.)

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Participant Observation	___	___	___	___	41 - 42
Non-participant Observation	___	___	___	___	43 - 44
Interview	___	___	___	___	45 - 46
Questionnaire	___	___	___	___	47 - 48
Bibliographic	___	___	___	___	49 - 50
Content analysis	___	___	___	___	51 - 52
Experimental	___	___	___	___	53 - 54
Available Data	___	___	___	___	55 - 56
Others ______________________ (specify)	___	___	___	___	57 - 58
______________________	___	___	___	___	59 - 60

CR 9

21 What are your analytic approaches?
Exclude student projects which are not a part of your own basic research. (Check as many as apply.)

	Present Research		Past Projects (last 2 years)		
	YES	NO	YES	NO	
Historical	____	____	____	____	61 - 62
Comparative	____	____	____	____	63 - 64
Logical	____	____	____	____	65 - 66
Theoretical	____	____	____	____	67 - 68
Statistical (descriptive)	____	____	____	____	69 - 70
Statistical (inferential)	____	____	____	____	71 - 72
Others ______________ (specify)	____	____	____	____	73 - 74
______________	____	____	____	____	75 - 76

END CARD 4

RESEARCH EMPHASIS

22 In your present position, do you usually emphasize (check only one)

a) Research primarily undertaken to test or expand theory	____ 1	05
b) Research primarily undertaken to improve practice	____ 2	
c) Both about equally	____ 3	
d) Other ______________ (specify)	____ 4	

23 In your present position, do you usually emphasize (check only one)

a) Research related to a professional area e.g. administration, etc.	____ 1	06
b) Research related to an academic area e.g. psychology, philosophy, etc.	____ 2	
c) Both about equally	____ 3	
d) Other ______________ (specify)	____ 4	

DEFINITIONS

24 Since the term "educational research" is used in a variety of ways, it is often difficult to know what a person means by it. To which of the following kinds of activity do you ordinarily apply the term "educational research"?
(Check as many as you wish)

a) Collecting statistics on school practices and educational outcomes, sometimes called "school status studies".	___	07
b) Designing new curricula and methods of instruction.	___	08
c) Evaluating the effectiveness of new curricula and methods.	___	09
d) Local school surveys (curriculum, financial, plant, etc.)	___	10
e) Investigating factors which affect the teaching-learning process in the classroom.	___	11
f) Disseminating new curricula methods of instruction, or other school practices.	___	12
g) Investigating factors which affect school administration.	___	13
h) General psychological studies of human learning or development.	___	14
i) Presenting evidence to legislators of the need for greater support for the schools.	___	15
j) Developing new tests and measurements.	___	16
k) Analyzing the key concepts or philosophical assumptions underlying current educational issues.	___	17
l) Studying the educational research journals for lecture materials.	___	18

25 Are there other activities which should be included in the list above as research activities?

Specify ____ 19

____

____

____

PRIORITIES

26 Which of the activities in question 24 do you feel are most important for the long range improvement of education, regardless of whether you have checked the activity as "research". (Write the appropriate letters in the space below in order of their importance.)

1st ____ 2nd ____ 3rd ____ 20 - 22

27 Have the following factors tended to influence your choice of research problems to date? (Check as many as apply)

	YES	NO	
a) Past experience not related to profession or training	____	____	23
b) Training and ability	____	____	24
c) Preoccupations of your department, faculty or organization	____	____	25
d) Availability of funds	____	____	26
e) Current educational problems	____	____	27
f) Problems related to content field you are teaching	____	____	28
g) Research in teaching methods	____	____	29
h) Problems related to faculty-student relations	____	____	30
i) Other ______________________ (specify)	____	____	31

Indicate 1st, 2nd, 3rd choice.

1st CHOICE ____ LETTER 2nd CHOICE ____ LETTER 3rd CHOICE ____ LETTER 32 - 34

28 If the Institute for Research in Education published periodically a priority list of areas of educational activity in which provincial needs for research exist and are therefore most likely to receive financial support, do you believe that this would influence your choice of research topics?

YES____ NO____ 35

Comment (if you wish):______________________________

____

29 There is controversy as to who is responsible for the actual conception as well as for the conduct of research in Education. Some educators feel that every classroom teacher should conduct research, whereas others feel that only those with sophisticated training in research at the graduate level should conduct research. Which of the following do you believe should be involved in the actual conception as well as the conduct of research in Education, and to what extent?

(Check as many as necessary.) (See below before answering.)

	Degree of Involvement				
	NONE 1	MODERATE 2	HEAVY 3	VERY HEAVY 4	
a) Class Teachers	___	___	___	___	36
b) School Administrators	___	___	___	___	37
c) Professors involved in Teacher Education	___	___	___	___	38
d) Professional Educational Researchers in Faculties of Education	___	___	___	___	39
e) Behavioral Scientists in Faculties of Education	___	___	___	___	40
f) Behavioral Scientists in Other Faculties	___	___	___	___	41
g) Other ____________ (specify)	___	___	___	___	42
____________________	___	___	___	___	43
____________________	___	___	___	___	44

N.B. You will notice that the responses provided are rather restricted. This reflects the original responses provided within Faculties of Education. Use the last three "Other" spaces to include people in your kind of organization.

END CARD 5

SUPPORT FOR RESEARCH

30 Could you inform us on the sources and amounts of your research funds for the last two (academic) years for work done (a) in this province; (b) elsewhere.
Do not include graduate fellowships, student assistantships, or similar aid.

Year	Sources		Amounts	In the Province 1	Elsewhere 2		
1967-68	________	( )	$________	____	____	( )	05 - 12
	________	( )	$________	____	____	( )	13 - 20
	________	( )	$________	____	____	( )	21 - 28
1968-69	________	( )	$________	____	____	( )	29 - 36
	________	( )	$________	____	____	( )	37 - 44
	________	( )	$________	____	____	( )	45 - 52

31 If you received research grants in the past two (academic) years did they include remuneration for

	YES 1	NO 2	
a) Yourself	____	____	53
b) Research Assistants	____	____	54
c) Student Assistants	____	____	55
d) Consultants	____	____	56
e) Secretaries & Clerical	____	____	57
f) Others ________ (specify)	____	____	58

32 Are there financial needs in your research activities which are not being supported by grants?

YES ____ NO ____ 59

If "yes" specify below

PURPOSE FOR WHICH MONEY IS NEEDED	MODERATELY IMPORTANT 1	IMPORTANT 2	VERY IMPORTANT 3	
________	____	____	____	60
________	____	____	____	61
________	____	____	____	62

END CARD 6

33 In searching out funds for research, have you made formal applications in the last two years?

YES____ NO____ 05

If "yes" to whom did you apply, and to what extent were you successful?

Applied to		Amount requested	Percent received		
____________	( )	____________	____	( )	06 - 14
____________	( )	____________	____	( )	15 - 23
____________	( )	____________	____	( )	24 - 32

34 Do you need any equipment not available to you for your present projects or any that you would like to carry out.

YES____ NO____ 33

If "yes" specify below.

EQUIPMENT NEEDED (specify)		MODERATELY IMPORTANT 1	IMPORTANT 2	INDISPENSABLE 3	
____________	( )	____	____	____	34 - 36
____________	( )	____	____	____	37 - 39
____________	( )	____	____	____	40 - 42

35 Comment on the availability of bibliographic resources relevant to your research work.

	Locally Available			Available from outside sources e.g. interlibrary loan			
	POOR 1	ADEQUATE 2	EXCELLENT 3	POOR 1	ADEQUATE 2	EXCELLENT 3	
Current journals	____	____	____	____	____	____	43 - 44
Bound periodicals	____	____	____	____	____	____	45 - 46
Research Reports, final	____	____	____	____	____	____	47 - 48
On-going Research, pre-publication	____	____	____	____	____	____	49 - 50
Abstracts	____	____	____	____	____	____	51 - 52
Microfiches	____	____	____	____	____	____	53 - 54
Microfilms	____	____	____	____	____	____	55 - 56
Other ________ (specify)	____	____	____	____	____	____	57 - 58
____________	____	____	____	____	____	____	59 - 60
____________	____	____	____	____	____	____	61 - 62

36 Do you feel the need for information about on-going incomplete research at the pre-publication stage?

YES___ NO___ 63
1 2

If "yes", in what form would you find it most useful?

____ 64 - 65

____

____

____

37 What specialized consultant services and personnel are available to you in your role as researcher?

	NOT NECESSARY IN MY RESEARCH 1	NOT AVAILABLE 2	AVAILABLE 3	
Information Retrieval	___	___	___	66
Documentation	___	___	___	67
Data Bank	___	___	___	68
Census-type Data	___	___	___	69
Statistics Adviser	___	___	___	70
Research Design Consultant	___	___	___	71
Computer Services	___	___	___	72
Others (specify)				
______________________	___	___	___	73
______________________	___	___	___	74

END CARD 7

DATA

38 How accessible is the population from which you would like to draw your data? Please specify the population(s).

POPULATION		NOT ACCESSIBLE 1	NOT VERY ACCESSIBLE 2	READILY ACCESSIBLE 3	
________	( )	____	____	____	05 - 07
________	( )	____	____	____	08 - 10
________	( )	____	____	____	11 - 13
________	( )	____	____	____	14 - 16

39 Are there any needs for data that are not met? YES ___ 1 NO ___ 2 — 17

If "yes" specify below.

DATA NEEDED (specify)		MODERATELY IMPORTANT 1	IMPORTANT 2	VERY IMPORTANT 3	
________	( )	____	____	____	18 - 20
________	( )	____	____	____	21 - 23
________	( )	____	____	____	24 - 26
________	( )	____	____	____	27 - 29

PERSONNEL

40 Indicate the personnel available to you in your role as researcher.

	NOT NECESSARY TO MY RESEARCH 1	NOT AVAILABLE 2	AVAILABLE 3	
Secretary	____	____	____	30
Typist	____	____	____	31
General Clerical	____	____	____	32
Translator	____	____	____	33
Computer Programmers	____	____	____	34
Non-student Research Assistants	____	____	____	35
Student Research Assistants	____	____	____	36
Guidance to Sources of Funds	____	____	____	37
Technicians	____	____	____	38
Other ________ (specify)	____	____	____	39
________	____	____	____	40

41 In this (academic) year to what extent have you worked together with other scientific personnel in your research activities?

PEOPLE YOU WORK WITH:	NEVER 1	SELDOM 2	OFTEN 3	VERY OFTEN 4	
a) Researchers in other organizations					41
b) Colleagues in your organization					42
c) Research Assistants (not students)					43
d) Research Assistants (students)					44
e) Student Aides					45
f) Consultant (specify field)					
					46
					47
g) Other (specify)					48
					49
PEOPLE YOU WORK FOR:					
h) as Consultant					50
i) as Assistant					51
j) Other (specify)					52
					53

42 Where are the persons referred to in 41 located?

	YES	NO	
Quebec			54
Rest of Canada			55
United States			56
France			57
United Kingdom			58
Belgium			59
Switzerland			60
Other (specify)			61
			62

43 In this (academic) year to what extent has your research work involved you in direct interaction with other educational personnel?

	NEVER 1	SELDOM 2	OFTEN 3	VERY OFTEN 4	
a) Directors-General	____	____	____	____	63
b) School Principals	____	____	____	____	64
c) Supervisors of Subjects					
____________________ (subject)	____	____	____	____	65
____________________ (subject)	____	____	____	____	66
d) Other School Administrators					
____________________ (specify)	____	____	____	____	67
____________________	____	____	____	____	68
e) Teachers	____	____	____	____	69
f) Professors	____	____	____	____	70
g) Pupils	____	____	____	____	71
h) Teacher Organizations	____	____	____	____	72
i) Other ____________ (specify)	____	____	____	____	73
____________________	____	____	____	____	74

END CARD 8

44 In general, in the (academic) year, how fruitful have interchanges been with researchers outside your faculty or organization?

NON OCCURED ____ 1 LITTLE ____ 2 MODERATELY ____ 3 VERY ____ 4 05

Did you encounter any problems with interchanges? YES____ NO____ 06

If "YES", specify ______________________________

____

____

What directions would you like future interchanges to take?

____

____

____

____

You had the chance in various parts of this questionnaire to express your needs and desires, as a researcher in education in this province. This final section is intended to give you the opportunity to make known any other wishes, observations, opinions, and particularly suggestions which might be useful in the attempt to develop a favorable climate for the conduct of fruitful educational research. This section is therefore not as structured as the rest of the questionnaire, but provides you with blank spaces to tell us the things that we could not have foreseen when we constructed our questionnaire.

Use last page, if necessary.

44 In view of the aim of this part of the questionnaire, would you make as many suggestions as you can which you believe would bring the research situation in your organization close to the ideal one? Try to indicate the order of importance of your suggestions.

45 Are there any ways in which Government agencies such as Canada Council, I.R.E., etc., could make a really telling contribution to your work as researcher?

YES___ 1 NO___ 2 07

Try to indicate roughly the order of importance of your suggestions.

FINAL SECTION (for non-university personnel only)

46 Are you involved in the training of researchers?

YES___ NO___ 08

If so, to what extent?

____

____

47 Check each of the following areas in which you have some training and indicate at what level.

	NONE	ELEMENTARY	INTERMEDIATE	ADVANCED	
Statistics	___	___	___	___	09
Theory of Measurement	___	___	___	___	10
Methods and Techniques of Measurement	___	___	___	___	11
Research Design and Methodology	___	___	___	___	12
Computer Applications	___	___	___	___	13

48 Why are you carrying out research in a non-university context?

Do you feel that your research is related to education?

YES___ NO___ 14

Explain, if you wish ______________________________

____

____

49 To what extent would your organization be interested in statements of research priorities from outside sources?

DEFINITELY YES	PROBABLY YES	UNCERTAIN	PROBABLY NOT	DEFINITELY NOT
1	2	3	4	5
___	___	___	___	___

15

Comment if you wish ________________________________

____

____

50 To what extent would your organization be interested in cooperating with universities?

DEFINITELY YES	PROBABLY YES	UNCERTAIN	PROBABLY NOT	DEFINITELY NOT
1	2	3	4	5
___	___	___	___	___

16

END CARD 9

Comment if you wish ________________________________

____

____

APPENDIX V-1

A SUMMARY OF SOME FACTORS SIGNIFICANTLY RELATED TO RESEARCH ACTIVITY[1]

FACTORS	POPULATIONS		
	Professors of Education	Students[2]	Researchers in Other Organizations
Low Academic Rank	yes[3]	n.e.	n.e.
Doctorate with Thesis Completed	no	n.e.	n.e.
Teacher Certificate (Related to Lower Research Activity)	no	yes	yes
Teaching Experience at the Elementary Level	no	n.e.	n.e.
Teaching Experience at the Secondary Level	no	n.e.	n.e.
Time Spent[4] on Preparation for Teaching	no	n.e.	n.e.
Time Spent on Teaching	no	n.e.	n.e.
Time Spent on Supervising Students	no	n.e.	n.e.
Time Spent on Administration	no	n.e.	n.e.
Time Spent on Committee Work	no	n.e.	n.e.
More Than Ten Hours Per Week Spent on Research	yes	n.e.	n.e.
Proportion of Work Week Devoted to Research	n.e.	n.e.	no
Teaching Summer School	no	n.e.	n.e.
Emphasis on Research to Expand Theory vs to Improve Practice	yes	n.e.	n.e.
Contact with Professor on a One-to-One Basis	n.e.	yes	n.e.
Contact with Professor within a Group	n.e.	no	n.e.
Work as Assistant	n.e.	yes	n.e.
Having a Research Assistantship	n.e.	yes	n.e.
Formal Application for Funds	yes	yes	yes

---

[1] Research activity defined as: research done in the past (1 to 6 projects) and research currently under way (1 to 3 projects).

[2] Most relationships are established between factors and research currently underway only; the exception is with having a teacher certificate, which was related to research under way and research done in the past.

[3] Yes = significantly related at the .05 level of significance or better; no = not significantly related; n.e. = not examined.

[4] "Time spent" means ten hours or more per week.

APPENDIX V-1 (cont'd)

FACTORS	POPULATIONS		
	Professors of Education	Students	Researchers in Other Organizations
OPINIONS			
In Favour of a Dual System of Degrees	no	n.e.	n.e.
All Faculty Members Should Be Required to Do Some Research	no	n.e.	n.e.
Class Teachers Should Be Involved in Conception and Conduct of Research	no	n.e.	n.e.
In Making Faculty Appointments, Preference Should Be Given to Research Degree	yes	n.e.	n.e.
In Making Faculty Appointments, Preference Is Given to Research Degree	no	n.e.	n.e.
Emphasis Given to Research Degree vs Professional Is Insufficient	no	n.e.	n.e.
More than 50% of Faculty Should Be Involved in Supervision of Student Research	no	n.e.	n.e.
Other Faculties Should Supervise Research of Students in Education	no	yes	n.e.
Admission to Doctoral Studies Should Require Teacher Training	no	n.e.	n.e.
Admission to Doctoral Studies Should Require Teaching Experience	no	n.e.	n.e.
A Greater Number of Students in Summer School Would Decrease Research Capabilities of the Faculty	no	n.e.	n.e.
Number of Graduate Students in Education Planning Careers in Research Is Insufficient	no	n.e.	n.e.
Plans for Research in Next Two Years	yes	n.e.	yes
Plans to Carry out Research After Graduation	n.e.	yes	n.e.
Wish to See Participation of Non-Education Professors on Examination Committees for Theses	yes	n.e.	n.e.
Wish to See Joint Research Appointments	yes	n.e.	n.e.

APPENDIX V-1 (cont'd)

FACTORS	POPULATIONS		
	Professors of Education	Students	Researchers in Other Organizations
Wish to See Visiting Professors For Teaching	yes	n.e.	n.e.
Occurrence of Interchanges with Academic Departments of University	yes	n.e.	n.e.
Work with Researchers in Other Organizations	n.e.	n.e.	no
Work with Colleagues in Own Organization	n.e.	n.e.	yes

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